

**BOARD OF COUNTY COMMISSIONERS
AGENDA ITEM SUMMARY**

Meeting Date: August 18, 2004

Division: Growth Management

Bulk Item: Yes No X

Department: Planning and Environmental Resources

AGENDA ITEM WORDING: A public hearing to adopt by resolution the Evaluation and Appraisal Report (EAR) for the Monroe County Year 2010 Comprehensive Plan.

ITEM BACKGROUND: Pursuant to Section 163.3191, F.S., "each local government shall adopt an evaluation and appraisal report (EAR) once every seven years assessing the progress in implementing the local government's comprehensive plan." The EAR is designed to evaluate how successfully a community has been in addressing major community land use planning issues through implementation of its comprehensive plan. Based on this evaluation, the report suggests how the plan should be revised to better address community objectives, changing conditions and trends affecting the community, and to changes in state requirements regarding growth management.

The EAR does not review the entire comprehensive plan but instead concentrates on those issues which are of major concern to Monroe County. These issues are: Hurricane Evacuation, Habitat Protection, Water Quality, and Affordable Housing. Overall, the EAR reveals that the County has completed numerous tasks to implement the policies of the Comprehensive Plan, such as the completion of the Stormwater Management Master Plan, the Sanitary Wastewater Master Plan, the completion of the cesspool elimination program, amendments to strengthen environmental standards in the Land Development Regulations, the completion of the Habitat Conservation Plan, and the on-going land acquisition program for affordable housing and environmental protection. Proposed amendments based on the EAR include policies to implement the FKCCS, the Livable CommuniKeys Plan, and Goal 105 of the Comprehensive Plan. A few minor comprehensive plan amendments are also proposed in order to delete policies that have been completed or policies with outdated references.

PREVIOUSLY RELEVANT BOCC ACTION:

April 15, 1993- Adoption of the Monroe County Year 2010 Comprehensive Plan.

CONTRACT/AGREEMENT CHANGES: N/A

STAFF RECOMMENDATION: Approval.

TOTAL COST: \$0

BUDGETED: N/A No

COST TO COUNTY: \$0

SOURCE OF FUNDS: N/A

REVENUE PRODUCING: Yes No X

AMOUNT PER MONTH N/A **Year**

APPROVED BY: County Atty

OMB/Purchasing Risk Management

DIVISION DIRECTOR APPROVAL:


Timothy J. McGarry, AICP

DOCUMENTATION: Included X

To Follow Not Required

DISPOSITION:

AGENDA ITEM # 04

County of Monroe

Growth Management Division

2798 Overseas Highway
Suite 400
Marathon, Florida 33050
Voice: (305) 289-2500
FAX: (305) 289-2536




Board of County Commissioners

Mayor Murray E. Nelson, Dist. 5
Mayor Pro Tem, David Rice, Dist. 4
Comm. Dixie Spehar, Dist. 1
Comm. George Neugent, Dist. 2
Comm. Charles "Sonny" McCoy, Dist. 3

TO: Board of County Commissioners

VIA: Timothy J. McGarry, AICP, Director, Growth Management Division

FROM: K. Marlene Conaway, Director 
Department of Planning and Environmental Resources

DATE: August 9, 2004

RE: Adoption of the Evaluation and Appraisal Report (EAR)

The Planning Department has now completed the Evaluation and Appraisal Report (EAR) for the Monroe County Year 2010 Comprehensive Plan. The EAR has been completed pursuant to Section 163.3191, F.S., which mandates that "each local government shall adopt an evaluation and appraisal report (EAR) once every seven years assessing the progress in implementing the local government's comprehensive plan."

The EAR provides a self-evaluation of how successful a community has been in addressing major community land use planning issues through implementation of its comprehensive plan. Based on this evaluation, the report suggests how the plan should be revised to better address community objectives, changing conditions and trends affecting the community, and to changes in state requirements regarding growth management.

For the Monroe County EAR, the County staff along with staff from DCA and local municipalities and agencies identified the following issues as the major topic of concern in evaluating the Monroe County Comprehensive Plan: Affordable Housing, Habitat Protection, Hurricane Evacuation, and Water Quality.

Staff's completion of the EAR indicates that the County has implemented most of the policies in the Comprehensive Plan and is continuing to progress in meeting the goals and objectives of the Comprehensive Plan.

Highlights of the County's successes include the completion of the Stormwater Management Master Plan, the Sanitary Wastewater Master Plan, the Habitat Conservation Plan, the Livable CommuniKeys Plan for Big Pine/No Name Key, the

Florida Keys Carrying Capacity Study, the Residential Canals Water Quality Study, and an update of the Hurricane Evacuation Study.

Other actions such as the adoption of various changes to the Land Development Regulations implementing stricter environmental design standards, the Rate of Growth Ordinance, the elimination of cesspools, on-going land acquisition for habitat protection and affordable housing, the expansion of the boundaries for public land acquisition, and providing funding to improve water quality, all contribute to the County's success in implementing the policies of the Comprehensive Plan.

In the future, the Planning Department will propose to amend the Comprehensive Plan to eliminate policies that have been completed or have outdated references. Staff will also propose to adopt or amend policies to implement the findings of the various studies that have been completed as part of the Comprehensive Plan.

Finally, the planning staff will propose the adoption of LDRs to implement the Tier System. The utilization of the Tier System for assigning ROGO and NROGO points, determining the amount of clearing of upland native vegetation, and the prioritization of lands for land acquisition will further enhance the County's ability to meet the goals and objectives of the Comprehensive Plan.

RESOLUTION NO. _____ - 2004

A RESOLUTION OF THE BOARD OF COMMISSIONERS OF MONROE COUNTY, FLORIDA ADOPTING THE EVALUATION AND APPRAISAL REPORT FOR THE MONROE COUNTY YEAR 2010 COMPREHENSIVE PLAN; STATING THE INTENT OF THE COMMISSION TO AMEND THE COMPREHENSIVE PLAN BASED UPON RECOMMENDATIONS CONTAINED IN THE REPORT; AND APPROVING TRANSMITTAL OF THE REPORT TO THE DEPARTMENT OF COMMUNITY AFFAIRS IN ACCORDANCE WITH SECTION 163.3191, FLORIDA STATUTES.

WHEREAS, the Florida Legislature intends that local planning be a continuous and ongoing process; and

WHEREAS, the Monroe County Board of County Commissioners adopted the Monroe County Comprehensive Plan on April 15, 1993; and

WHEREAS, Section 163.3191, Florida Statutes, directs local governments to periodically assess the success or failure of the adopted plan to adequately address changing conditions and state policies and rules; and

WHEREAS, Section 163.3191, Florida Statutes, directs local governments to adopt needed amendments to ensure that the plan provides appropriate policy guidance for growth and development; and

WHEREAS, the Monroe County Planning Commission, acting as the designated Local Planning Agency, has reviewed the Evaluation and Appraisal Report, held an advertised public hearing, provided for participation by the public in the process, and rendered its recommendations to the Board of County Commissioners; and

WHEREAS, the Board of County Commissioners has reviewed the Evaluation and Appraisal Report, held an advertised public hearing, and provided for comments and public participation in the process in accordance with the requirements of state law and the procedures adopted for public participation in the planning process;

NOW THEREFORE BE IT **RESOLVED** BY THE BOARD OF COUNTY COMMISSIONERS OF MONROE COUNTY, FLORIDA, THAT:

Section 1: The Board of County Commissioners does hereby adopt the Evaluation and Appraisal Report for the Monroe County Comprehensive Plan.

Section 2: The Board of County Commissioners does hereby state its intention to amend the Monroe County Comprehensive Plan in accordance with the recommendations contained in the Evaluation and Appraisal Report.

Section 3: The Board of County Commissioners does hereby approve transmittal of the Evaluation and Appraisal Report to the Department of Community Affairs for the purpose of a sufficiency review in accordance with Section 163.3191, Florida Statutes.

Section 4: This Resolution shall become effective immediately upon its passage.

Section 5: All Resolutions and parts of Resolution in conflict herewith are repealed.

PASSED AND ADOPTED by the Board of County Commissioners of Monroe County, Florida, at a regular meeting of said Board held on the 18th day of August, 2004.

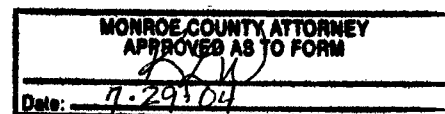
Mayor Murray E. Nelson	_____
Mayor Pro Tem David P. Rice	_____
Commissioner Dixie Spehar	_____
Commissioner George Neugent	_____
Commissioner Charles "Sonny" McCoy	_____

(Seal)
Attest: DANNY L. KOLHAGE, Clerk

BOARD OF COUNTY COMMISSIONERS
MONROE COUNTY, FLORIDA

Attest: _____
Deputy Clerk

By: _____
Mayor/Chairperson



EVALUATION AND APPRAISAL REPORT FOR THE MONROE COUNTY YEAR 2010 COMPREHENSIVE PLAN

PREPARED BY: MONROE COUNTY GROWTH MANAGEMENT DIVISION
AUGUST 2004

EVALUATION AND APPRAISAL REPORT
FOR THE
MONROE COUNTY YEAR 2010
COMPREHENSIVE PLAN

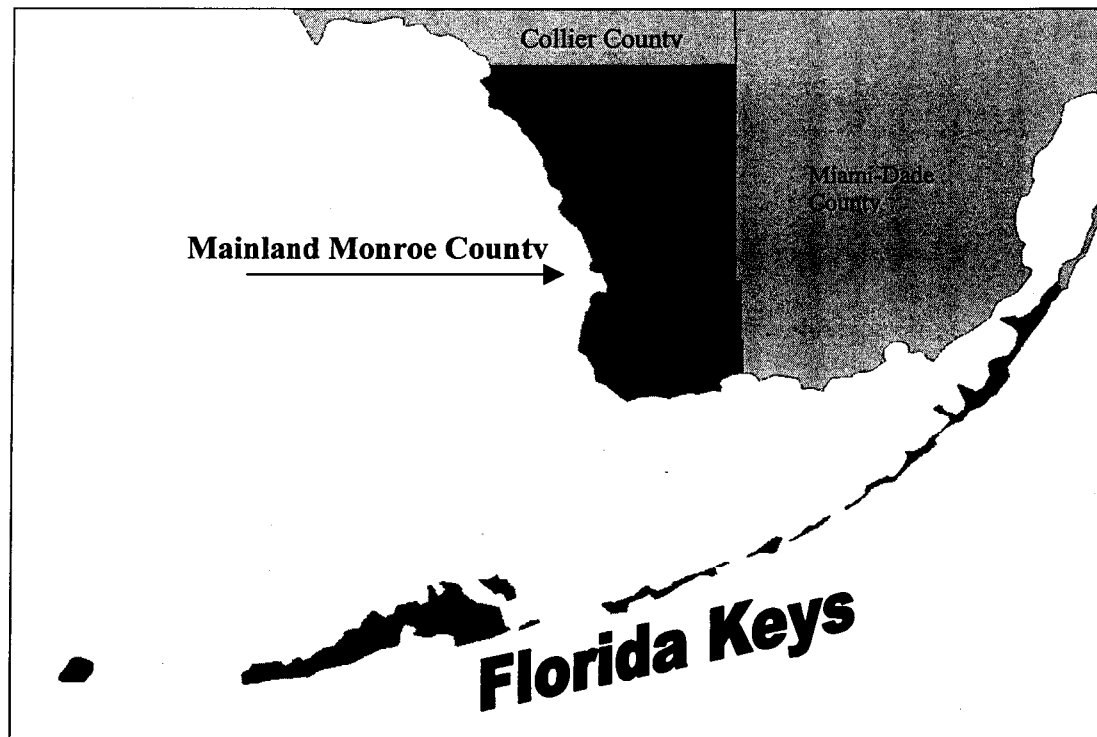
PREPARED BY: MONROE COUNTY GROWTH MANAGEMENT DIVISION
AUGUST 2004

MONROE COUNTY EVALUATION AND APPRAISAL REPORT (EAR) INTRODUCTION

Introduction

Located at the southernmost tip of the State of Florida, the Keys portion of Monroe County consists of a series of islands, or keys, extending in a southwesterly direction into the Atlantic Ocean and the Gulf of Mexico. The mainland portion of Monroe County is bordered by Collier County to the north and Miami-Dade County to the south.

Figure 1.1 The mainland and island portion of Monroe County.



The total area of Monroe County is approximately 1.2 million acres or approximately 1,875 square miles (Figure 1.2). Large portions of this total consist of submerged lands associated with parks and preserves under the jurisdiction of the federal and state governments. The total area of the County exclusive of submerged lands is approximately 566,655 acres or approximately 885 square miles. The Keys portion account for approximately 65,443 acres or 102 square miles.

Since the final adoption of the Monroe County Year 2010 Comprehensive Plan by the Department of Community Affairs and Administration Commission in July 1997, the Village of Islamorada and the City of Marathon were incorporated to form two additional municipalities in Monroe County (Figure 1.2).

Figure 1.2 Monroe County Land Area

Division	Area
Mainland	
Everglades National Park	943,275 acres
Big Cypress National Park	126,437 acres
Subtotal/Mainland	1,070,162 acres
Incorporated Municipalities	
City of Key West	3,712 acres
City of Key Colony Beach	285 acres
City of Layton	85 acres
Village of Islamorada	3,796 acres
City of Marathon	5,800 acres
Subtotal/Incorporated Municipalities	13,678 acres
Keys (Unincorporated Portion)	51,747 acres
Fort Jefferson/Tortugas	64,379 acres
Total/Monroe County	1,200,344 acres



Area of Critical State Concern

Because of the extent and diversity of its natural resources, and in order to protect those resources, the Florida Keys are designated as an Area of Critical State Concern. As an ACSC, building and planning activities in the Keys are subject to oversight by the State Land Planning Agency, the Department of Community Affairs (DCA).

Planning and development activities have been greatly affected by the Critical Concern designation and oversight from the DCA. In addition to this, the results of scientific studies have prompted the formulation and implementation of smart growth initiatives that recognize the finite capacity for new development in the Florida Keys. The policies provide for economic and housing opportunities for residents without compromising the biodiversity of the natural environment and the continued ability of the natural and man-made systems to sustain livable communities in the Keys for future generations. These smart growth initiatives are implemented through the Livable CommuniKeys, Land Acquisition Program and a Rate of Growth Ordinance (ROGO).

Comprehensive Plan

The Monroe County Year 2010 Comprehensive Plan was prepared to cover a twenty year planning horizon (1990-2010) and population projections were made for this twenty year period. The Comprehensive Plan was adopted by the Monroe County Board of County Commissioners on April 15, 1993. After years of review, negotiations, and appeals by various affected parties, the Comprehensive Plan was adopted by the Department of Community Affairs and the Administration Commission of the State of Florida by FAC Rule 28-20.100 Part 1 and Part II on January 2, 1996 and July 17, 1997.

With the adoption of the Year 2010 Plan, the following critical issues emerged,

- Maintaining acceptable hurricane evacuation capability;
- Providing adequate wastewater and stormwater facilities to improve overall water quality,
- Determining a growth scenario that would protect habitat for threatened and endangered flora and fauna, and
- Providing adequate supply of affordable housing.

These issues must be addressed in light of the various factors that constrain full implementation of possible solutions. It is the objective and policy of the County to address these issues and continue to maintain the sustainability of the Florida Keys and at the same time improve and maintain the quality of life for all residents of the Keys.



Purpose of the Document

The purpose of the EAR is to look back over the past seven years since the plan was adopted and evaluate how well the plan is serving the County. It is a time to consider what kinds of changes have taken place and how the plan could be modified to reflect those changes. Specifically, the purpose of the evaluation process is to:

- Identify major issues for the community.
- Review past actions of the local government in implementing the plan since the last EAR.
- Assess the degree to which plan objectives have been achieved.
- Assess both successes and shortcomings of the plan.
- Identify ways that the plan should be changed.
- Respond to changing conditions and trends affecting the local community.
- Respond to the need for new data.
- Respond to changes in state requirements regarding growth management and development.
- Ensure effective intergovernmental coordination.

The EAR process also allowed for public input and interagency coordination to identify all issues of concern and to identify new strategies such as new objectives and policies or the creation of new programs that would improve the Comprehensive Plan's utility in guiding development and other activities which will address the issues of concern for the County.

An Evaluation of the Monroe County Comprehensive Plan should be conducted from the perspective of the activities that the County undertakes to implement its Comprehensive Plan. Programs and studies that assist the County in making land use decisions are an example of the type of activities that should be evaluated. Under this scenario, the EAR proposes to evaluate the effectiveness of these activities, ROGO, the ongoing Land Acquisition Program in the Keys, the implementation of Sanitary Sewers, Stormwater Projects, Hurricane Evacuation Modeling, Affordable Housing Projects, the Tier System, and other programs outlined in Goal 105.



These programs are available throughout the length of Monroe County and serve to implement the Comprehensive Plan. It is the purpose of the EAR to evaluate their effectiveness and to propose policy amendments that would contribute to the success of the goals of the comprehensive plan.

Public Participation Process and Visioning

On June 15, 2004, the Planning Department invited representatives from various municipalities and various state and federal agencies to a public workshop to discuss the completion of the Monroe County EAR. This workshop focused on identifying the main issues of concerns for the County and to initiate contact for the exchange of data and request for information that will be necessary for completing the EAR.

Previous to the public workshop to address the EAR, it should be noted that public participation and involvement has always been an integral part in the different planning activities designed to implement the policies and objectives of the Comprehensive Plan.

Studies such as the Stormwater Management Master Plan and the Sanitary Wastewater Master Plan involved numerous public workshops and public meetings in different areas of the Keys. Other studies such as the Habitat Conservation Plan and the Florida Keys Carrying Capacity Study also involved numerous public meetings.

Activities such as the creation of the Tier System and the Livable CommuniKeys Master Plan have all been completed or are being implemented with the input of the general public and other stakeholders. Since the adoption of the Comprehensive Plan in 1997, the process of implementing the Comprehensive Plan has included a series of interactive events designed to stimulate the involvement of as many of Monroe County's residents, property owners and visitors as possible.

Using the Livable CommuniKeys Program as a model, this program serves as a good example of how to empower individuals and groups to participate effectively in planning and create appropriate advisory mechanisms for meaningful public involvement in land use decisions and in the implementation of the Comprehensive Plan. The vision created through the LCP will be articulated through workshops, surveys, and ultimately a series of conceptual land use plans and images that translate the values, goals and priorities of citizens to the built environment.



The products of this process will help the Planning Department to identify the changes needed to the policies and regulations that guide the daily land use decisions of Monroe County departments, state and federal agencies. An action plan to achieve the vision will be prepared to ensure that any change manifested on the ground reflects the needs and preferences of Monroe County's citizens.

New planning tools, such as corridor redevelopment plans or design guidelines, advisory bodies (for example, local development review panels) or new programs (for example, a parks and recreation program) will evolve through this program. The planning process will ascertain which aspects of the Land Development Regulation, the Monroe County Year 2010 Comprehensive Plan, the Future Land Use Map and the Zoning Map require modification and the type of modification that is needed to implement the land use vision, goals and priorities of Monroe County citizens.

Throughout the Livable CommuniKeys process, staff will act as facilitators between members of the community, Monroe County advisory bodies, and the Board of County Commissioners, to ensure that there is optimum involvement and interaction. Relationships and processes that already exist will be strengthened by forming partnerships with state and federal agencies that dedicate resources to Monroe County.



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LIST OF ACRONYMS

ACOE	Army Corps of Engineers
ADID	Advanced Identification of Wetlands
CERP	Comprehensive Everglades Restoration Plan
DEP	Florida Department of Environmental Protection
DOT	Florida Department of Transportation
FCAA	Florida Keys Aqueduct Authority
FKCCS	Florida Keys Carry Capacity Study
FKNMS	Florida Keys National Marine Sanctuary
FWC	Florida Fish and Wildlife Conservation Commission
FWS	Fish and Wildlife Service
HCP	Habitat Conservation Plan
HEI	Habitat Evaluation Index
KEYWEP	Keys Wetlands Evaluation Procedure
LAMP	Land Acquisition Master Plan
LCMP	Livable CommuniKeys Master Plan
LDR	Land Development Regulations
ROGO	Rate of Growth Ordinance
SMMP	Stormwater Management Master Plan
SWMP	Sanitary Wastewater Master Plan
USFWS	U.S. Fish and Wildlife Service



MONROE COUNTY EVALUATION AND APPRAISAL REPORT POPULATION AND GROWTH TRENDS

This section of the EAR examines the changes in population, the number of residential building permits issued, and the amount of nonresidential floor area permissible. The demographic data used in the Comprehensive Plan is based on 1990 Census data and then projected out to 2015. The analysis examines the projected 2000 population figures and examines how closely they align with the actual 2000 Census data. The geographic scope of the analysis includes both the unincorporated as well as some of the incorporated portions of the Florida Keys.

Population Composition

There are three different measurements of population in Monroe County: the permanent population, the seasonal population, and the functional population. The capacity of most public facilities is designed based on potential peak demand. To help assess peak demand, the permanent and seasonal populations are often combined to give a "functional" population, or the maximum population demanding services.

The projected permanent population is based on a methodology created by The Department of Planning and Environmental Resources, and is based on 1990 Census data. Permanent population figures received from the 2000 Census data reflect a discrepancy in the estimates made by the planning model and actual census figures. At this time, the Planning and Environmental Resources Department is revising the methodology for population projection to accurately reflect the permanent population figures published by the 2000 Census.

Projected permanent residents spend most or all of the year in the County, while the seasonal population includes seasonal residents and the tourist population. The seasonal population includes the number of seasonal residents, the number of people staying in hotels, motels, vacation rentals, campsites, recreational vehicles, live aboard vessels, and those staying with friends and relatives.

It is important to remember that permanent population figures are for the entire calendar year, while the seasonal population figures used here is the number of seasonal residents and visitors in the Keys on any given evening. Seasonal population figures are not the total number of seasonal residents or visitors in the county over the calendar year, but the estimated number who stay on any given night.



The Tourist Development Council indicates that Monroe County hosts around three million visitors a year, however not all these people are in the Keys on the same evening. Peak seasonal population figures represent the number of people who could stay on any given evening based upon peak occupancy rates, and therefore represent the peak demand which could be placed on public facilities from seasonal visitors on any given evening.

When the peak seasonal population figures are combined with the permanent resident population, the result is the functional population. Actual 2000 Census data for the permanent population indicates a trend towards a higher seasonal percentage of the functional population.

Functional Population

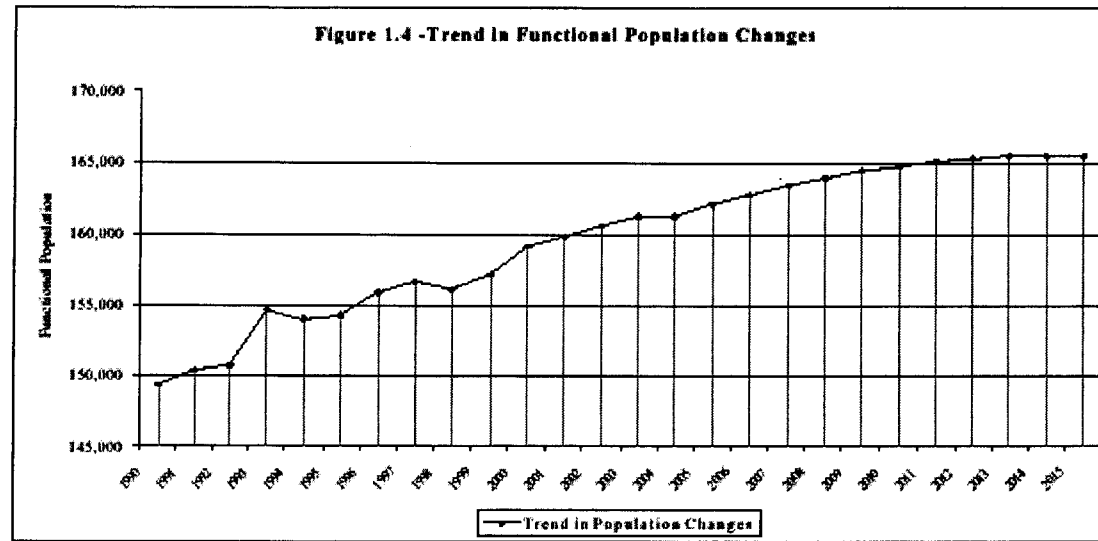
The functional population is the sum of the number of permanent residents and the peak seasonal population. Figure 1.3 shows the functional population for all of Monroe County (including the incorporated areas), excluding Mainland Monroe County and the population in the Dry Tortugas. The functional population of Monroe County is expected to grow by more than 16,000 people from 1990 to 2015. This represents an increase of almost eleven percent (11%) over the twenty-five year period.

Figure 1.3 - Projected Functional Population of Monroe County			
County Wide			
Year	Functional Population	Numerical Change	Percentage Change
1990	149,348	*	*
1995	154,255	4,907	3.18%
2000	159,113	4,858	3.05%
2005	162,041	2,928	1.81%
2010	164,769	2,728	1.66%
2015	165,366	597	0.36%

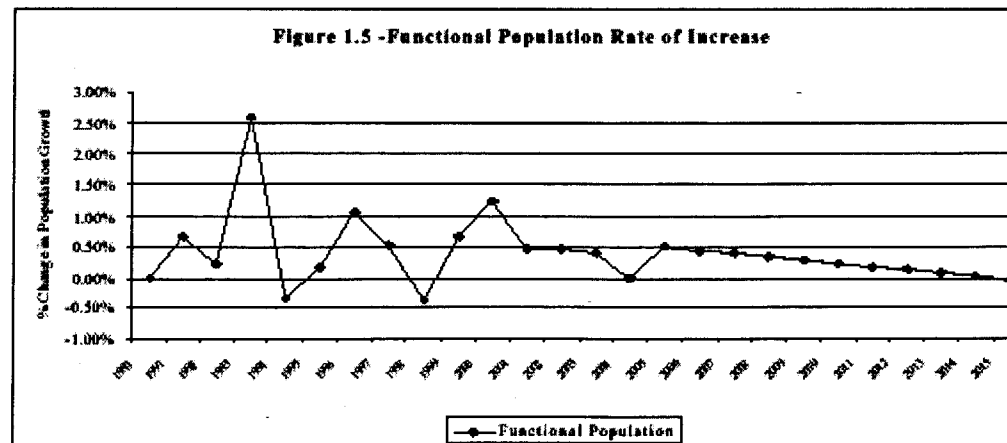
Source: Monroe County Planning Department, 2003



Figure 1.4 shows the trend in Functional Population Changes from 1990 to 2015.



However, the numerical and percent change columns show that the *rate* of increase is expected to slow dramatically over the same time period (see Figure 1.5).



Section 9.5-292 of the Land Development Regulations (LDRs) divides Monroe County into three service areas. The Upper Keys service area includes the area from Mile Marker 83.5 to 112, the Middle Keys includes Mile Marker 47.5 to 83.4, and the Lower Keys service area is composed of Mile Marker 4 to 47.4.

Figure 1.6 shows the breakdown in functional population by the three service areas. Regionally, the Upper Keys accounted for the largest portion of the 1990 unincorporated functional population (42,171 people, or 40.9% of the total). This is followed by the Middle Keys, which is comprised of 29.6% (30,443 people) of the total 1990 functional population; and finally, the Lower Keys, which contained 30,387 people, or 29.5% of the unincorporated functional population. For the year 2003, the Upper Keys still has the largest unincorporated functional population (37,061, or 49.3% of the total), followed by the Lower Keys (34,034, or 45.3% of the total). The unincorporated functional population of the Middle Keys decreases dramatically to only 4,124 people or 5.5%. This sharp decrease in Middle Keys numbers is due to the incorporation of the City of Marathon.

Figure 1.6 - Projected Functional Population by Service Area 1990-2015						
Service Area	1990		2003		2015	
	Functional Population	% of Unincorp. Total	Functional Population	% of Unincorp. Total	Functional Population	% of Unincorp. Total
Upper Keys	42,171	40.94%	37,061	49.27%	38,362	48.66%
Middle Keys	30,443	29.56%	4,124	5.48%	4,206	5.34%
Lower Keys	30,387	29.50%	34,034	45.25%	36,263	46.00%
<i>Unincorporated Subtotal</i>	<i>103,001</i>	<i>100.00%</i>	<i>75,219</i>	<i>100.00%</i>	<i>78,831</i>	<i>100.00%</i>
Incorporated Areas	46,348		86,009		86,535	
County Total	149,349		161,228		165,366	
Source: Monroe County Planning Department, 2003						

The incorporation of Islamorada and of Marathon accounts for the drop in unincorporated functional population in the Upper Keys service areas in 2001. The functional population in the Middle Keys service area has declined more than eighty-seven percent (87%), while the Upper Keys service area lost twelve percent (12%) of its functional population as a result of these incorporations. The Lower Keys service area is expected to grow almost 12% from 1990 to 2003.



By the year 2015 the Upper Keys, with a functional population of 38,362 people, is expected to contain 48.7% of the unincorporated functional population. The Lower Keys are projected to have a functional population of 36,263 people in 2015, or 46% of the unincorporated total, while the Middle Keys will be reduced to 4,206 people, or 5.3% of the unincorporated county total.

Projected Permanent and Seasonal Population

The total permanent resident population in Monroe County was projected to grow from 78,855 people in 1990 to a potential 87,050 people by the end of 2003 and 90,654 people by 2015, an increase of fifteen percent (15%) over the twenty-five year period. The projected permanent resident population as a percentage of the functional population fluctuates between 53% and 55% from 2003 to 2015. The years 1991 and 1993 were the only years in which the county-wide permanent resident growth rate exceeded one percent (1%) per year.

Figure 1.7 - Projected Permanent and Seasonal County-wide Population 1990-2015							
	1990	1995	2000	2003	2005	2010	2015
Seasonal Population	70,493	71,266	73,491	74,177	73,737	74,533	74,712
Permanent Population	78,855	82,990	85,622	87,050	88,305	90,236	90,654
Functional Population	149,348	154,256	159,113	161,227	162,042	164,769	165,366
Source: Monroe County Planning Department, 2003							

The peak seasonal population in Monroe County was projected to grow from 70,493 people in 1990 to 74,177 people by the end of 2003 and a potential 74,712 people by 2015, an increase of six percent (6%) over the twenty-five year period. The peak seasonal population as a percentage of the functional population fluctuates between 45.2% and 47.2% over the period. The county-wide peak seasonal population growth rate exceeded four percent (4%) in 1993. Growth rates fluctuated between -1.7% and 1.9% for the remainder of the years under study, and are expected to steadily decline after the year 2003.

The incorporation of Islamorada and Marathon has created substantial reductions in both permanent and seasonal population for the Upper and Middle Keys service areas. As mentioned in a previous section, the Upper Keys service area lost 13% of its functional population (permanent population + seasonal population), and the Middle Keys service area is expected to lose 87% of its functional population as a result of these incorporations.



The functional population in the Upper Keys service area is expected to increase from 36,872 to 37,061 (0.35%) from 2002 to 2003. This projected increase results from the addition of 88 permanent residents and 103 in the seasonal population.

The functional population in the Lower Keys service area is expected to increase from 33,826 to 34,034 (0.61%) from 2002 to 2003. This projected increase results from the addition of 157 permanent residents and 51 in the seasonal population.

2000 Census Population

The projected population data for 2003 through 2015 presented in this report (both the permanent and seasonal populations) has been based on 1990 census data. The population projection model has not yet been updated to incorporate the Census 2000 data that was released in late 2001. However, a comparison of the projected 2000 permanent population and the actual population reported in the 2000 census shows that the projection overestimated the population of the unincorporated area by 3,298 people. Figure 1.8 shows that the difference between the projected 2000 data and the actual permanent population reported by the 2000 census for the entire Monroe County to be 6,093 persons. Taking this discrepancy into account, the permanent population of Monroe County is not growing as rapidly as predicted.

However, the functional population remains a valid estimate for planning purposes because of an increase in the amount of seasonal residents. In other words, although the permanent population was estimated to be larger than what was actually reported in the 2000 Census, the number of seasonal residents has increased. Therefore, the functional population estimates remain valid, and indicates an increase in the percentage of the seasonal population.



Figure 1.8 - Comparison of Census data to Permanent Population Projections				
	1990 Actual	2000 Actual	2000 Projected	2000 Actual - 2000 Projected
<i>Unincorporated Area</i>				
Upper Keys	19,740	15,168	17,435	-2,267
Middle Keys	13,948	800	1,098	-298
Lower Keys	18,062	20,008	20,741	-733
<i>Incorporated Areas</i>				
Islamorada	N/A	6,846	7,665	-819
Layton	183	186	208	-22
Key Colony Beach	977	788	1,101	-313
Marathon	N/A	10,255	11,272	-1,017
Key West	24,832	25,478	26,102	-624
Total	77,742	79,529	85,622	-6,093
Source: U.S Census Bureau and Monroe County Planning Department, 2003				

Number of Residential Permits

The second major component of the Growth Analysis Section is the number of residential permits issued. The majority of the new residential permits issued are for permanent residential use. However, some of the permits issued for permanent dwellings are used by the seasonal population.

One issue to remember when considering growth based upon building permits is the time lapse that occurs between when a permit for a new residence is issued, and when that residence is ultimately occupied. The knowledge that the Rate of Growth Ordinance (ROGO) was about to be adopted in the early 1990s caused many property owners to obtain building permits prior to when they were prepared to construct their dwellings. As a result, there are many dwellings in the Keys that have permits, but are not yet fully constructed or are only partially complete. Based upon this time lapse, the number of residential permits issued overstates the actual number of new residential dwellings that currently require public facilities.

The number of dwelling units (permanent and seasonal) which can be permitted in Monroe County has been controlled by ROGO since July of 1992. ROGO was developed as a response to the inability of the road network to accommodate a large-scale hurricane evacuation in a timely fashion. A series of complex models developed during the first evacuation



study identified an approximate number of additional dwelling units which could be permitted and which would not have a detrimental effect on the amount of time needed to evacuate the Keys. The ROGO system was developed as a tool to equitably distribute the remaining number of permits available both geographically and over time.

The ROGO system distributes a set number of allocations for new residential permits on a yearly basis from July 14 of one year to July 13th of the following year. Year 11 of the system started on July 14, 2002. Each service area of unincorporated Monroe County and several of the incorporated areas receive a set number of allocations for new residential permits that can be issued during that particular ROGO year. The number of allocations available to a particular area was based upon the supply of vacant buildable lots located in that area prior to the start of the ROGO system. The Ocean Reef area of north Key Largo is exempted from the ROGO system due to its proximity to Card Sound Road, an alternate evacuation route.

The ROGO system allowed 255 allocations for new residential units in unincorporated Monroe County each year for the first six years of the ROGO system. The number of allocations available was reduced by the State of Florida Administration Commission during Year 7 of ROGO based upon a lack of progress on the implementation of the Year 2010 Comprehensive Plan. Available allocations were reduced by twenty percent (20%), taking the available figure from 255 to 204 new residential units.

The number of available allocations in unincorporated Monroe County was further reduced by the incorporation of Islamorada, which now receives 22 residential allocations per year. The incorporation of Islamorada reduced the number of available allocations in unincorporated Monroe County from 204 to 182. This number was further reduced by the incorporation of Marathon, which received a total of 24 new residential allocations. The incorporation of Marathon reduced the number of available new residential allocations in unincorporated Monroe County from 182 to 158.

Market rate allocation in unincorporated Monroe County, the ROGO system will now allocate 46 units to the Upper Keys service area, 7 units to the Middle Keys service area, and 74 units to the Lower Keys, for an annual total of 133 additional residential units each ROGO year. Fifty-seven affordable allocations were rolled over from previous years making a total of 114 affordable allocations available for year 11.

Figure 1.9, on the following page, shows the breakdown of new residential permits issued for unincorporated Monroe County through the 1990s. The data presented in the table does not include permits issued in Key West, Key Colony Beach, Layton, or Islamorada. Also, the boundaries between the Upper and Middle Keys service areas, and the



boundaries used for this data are slightly different. The chart below compares the boundaries. Basically, the service areas from the Code breaks at Whale Harbor Channel, and does not include Upper and Lower Matecumbe in the Upper Keys, while the permitting records break at Channel Five and do include Upper and Lower Matecumbe in the Upper Keys. Figure 1.10 explains these differences.

According to Building Department records, 3,193 residential permits were issued from 1992 to 2002, with 80% (2,544) being issued to single family residences. Only 10% (335) of the residential permits were issued to duplex, multifamily, or mobile home projects. Almost 37% (1,369) of all the residential permits issued in the past decade were issued in 1991 to 1992 as applicants were attempting to obtain permits prior to ROGO. A total of 270 residential permits were issued in unincorporated Monroe County in 2002, a slight increase from 2001. There were more new residential permits issued in 1999 than any previous year back to 1992.



Figure 1.9 - New and Replacement Residential and Seasonal Units Permitted by Year for Unincorporated Monroe County							
		Single Family	Duplex	Multi-Family	Mobile Home/Trailer	House/Mobile	Total
1992	Upper Keys	190	38	0	6	23	257
	Middle Keys	67	0	0	1	0	68
	Lower Keys	189	0	14	0	0	203
	<i>Subtotal</i>	<i>446</i>	<i>38</i>	<i>14</i>	<i>7</i>	<i>23</i>	<i>528</i>
1993	Upper Keys	104	0	0	5	0	109
	Middle Keys	55	2	0	1	0	58
	Lower Keys	80	0	0	1	0	81
	<i>Subtotal</i>	<i>239</i>	<i>2</i>	<i>0</i>	<i>7</i>	<i>0</i>	<i>248</i>
1994	Upper Keys	109	0	0	3	0	112
	Middle Keys	94	0	0	0	0	94
	Lower Keys	36	0	0	1	0	37
	<i>Subtotal</i>	<i>239</i>	<i>0</i>	<i>0</i>	<i>4</i>	<i>0</i>	<i>243</i>
1995	Upper Keys	131	2	0	4	0	137
	Middle Keys	27	2	2	1	5	37
	Lower Keys	144	0	0	0	0	144
	<i>Subtotal</i>	<i>302</i>	<i>4</i>	<i>2</i>	<i>5</i>	<i>5</i>	<i>318</i>
1996	Upper Keys	114	0	3	3	0	120
	Middle Keys	40	0	15	0	0	55
	Lower Keys	83	0	0	6	0	89
	<i>Subtotal</i>	<i>237</i>	<i>0</i>	<i>18</i>	<i>9</i>	<i>0</i>	<i>264</i>
1997	Upper Keys	89	0	12	0	0	101
	Middle Keys	27	4	0	0	77	108
	Lower Keys	73	0	0	0	0	73
	<i>Subtotal</i>	<i>189</i>	<i>4</i>	<i>12</i>	<i>0</i>	<i>77</i>	<i>282</i>
1998	Upper Keys	78	0	0	3	0	81
	Middle Keys	13	0	0	0	110	123
	Lower Keys	66	0	0	0	0	66
	<i>Subtotal</i>	<i>157</i>	<i>0</i>	<i>0</i>	<i>3</i>	<i>110</i>	<i>270</i>
1999	Upper Keys	138	0	0	2	0	140
	Middle Keys	20	0	0	24	63	107
	Lower Keys	87	0	0	0	1	88
	<i>Subtotal</i>	<i>245</i>	<i>0</i>	<i>0</i>	<i>26</i>	<i>64</i>	<i>335</i>
2000	Upper Keys	67	0	35	0	0	102
	Middle Keys	4	0	0	0	34	38
	Lower Keys	75	0	0	0	0	75
	<i>Subtotal</i>	<i>146</i>	<i>0</i>	<i>35</i>	<i>0</i>	<i>34</i>	<i>215</i>
2001	Upper Keys	62	0	13	7	1	83
	Middle Keys	9	0	0	10	0	19
	Lower Keys	80	0	0	38	0	118
	<i>Subtotal</i>	<i>151</i>	<i>0</i>	<i>13</i>	<i>55</i>	<i>1</i>	<i>220</i>
2002	Upper Keys	10	0	11	14	2	37
	Middle Keys	0	0	0	22	0	22
	Lower Keys	8	0	0	45	0	53
	<i>Subtotal</i>	<i>193</i>	<i>0</i>	<i>25</i>	<i>81</i>	<i>2</i>	<i>270</i>
TOTAL		2,344	48	119	168	314	3,193
Source: Monroe County Building Department, 2003							



Figure 1.10 - Boundary Comparison Table				
Area	Service Area		Permit Office	
	PAEDS Included	Mid-Minor Range	PAEDS Included	Mid-Minor Range
Upper Keys	12B-22	83.5-112	12A-22	71-112
Middle Keys	7-13	47.5- 83.4	7-13	47.5-70.9
Lower Keys	1-6	4-47.4	1-6	4-47.4

Source: Monroe County Building Department, 2003

Figures 1.11 and 1.12 show the distribution of new residential permits issued in unincorporated Monroe County during 2001 and 2002.

Figure 1.11- Comparison of Residential Permits by Service Area 2001-2002

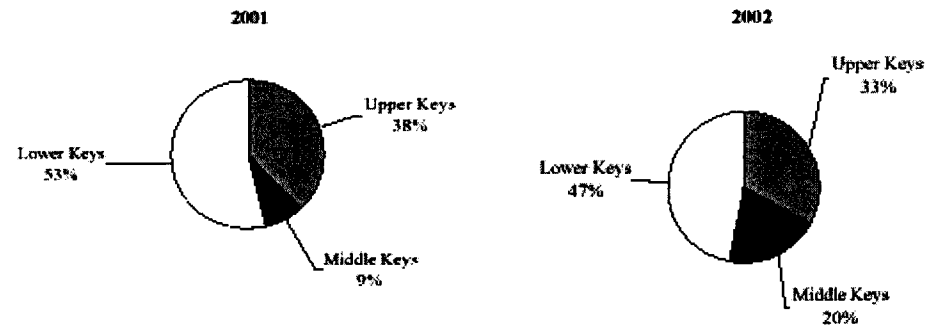


Figure 1.12 - Comparison of Residential Permit Types 2001-2002

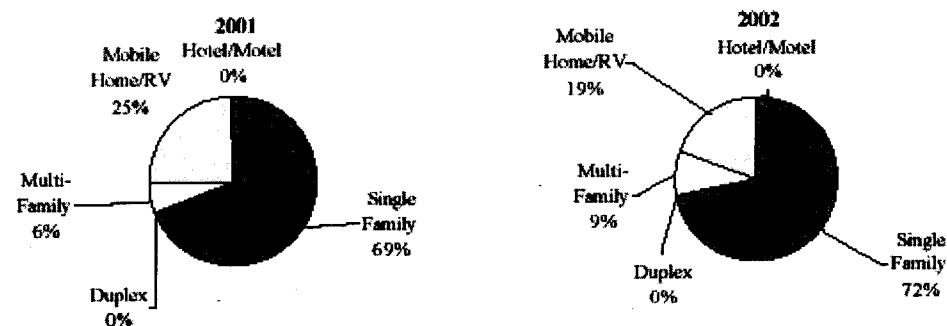


Figure 1.11 shows a decrease in the total number of permits issued in the Upper and Lower Keys service areas relative to the number issued in the Middle Keys from 2001 to 2002. There were 50 more new residential permits issued in 2002 than 2001.

Figure 1.12 shows the composition of residential permits issued in 2001 and 2002. No new duplexes were permitted in either year. Single family residential permits occupy the largest percentage in both years, with 13 more single-family permits being issued in 2002. The number of mobile home and RV permits decreased while multi-family permits slightly increased.

Figure 1.13 shows the total number of permits issued in unincorporated Monroe County from 1992 to 2002. The chart shows a swell in permitting activity prior to the adoption of ROGO, and then declines following its adoption.



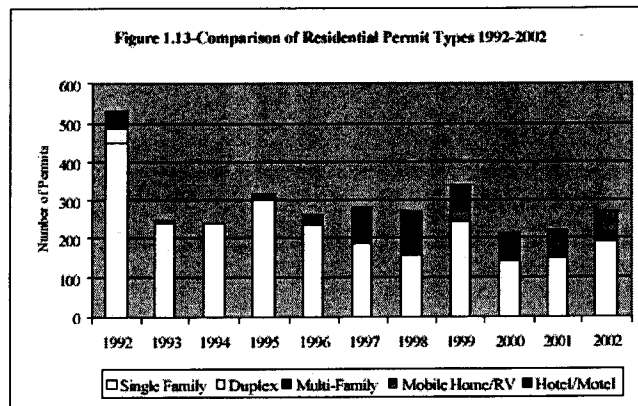
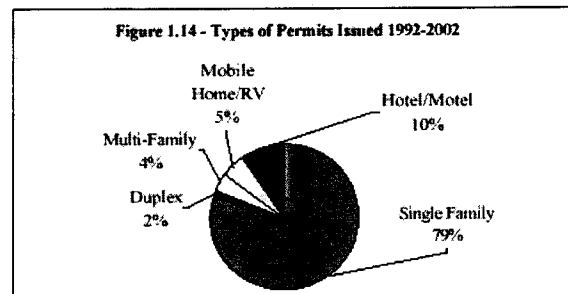


Figure 1.14 shows the breakdown in the types of residential permits issued over the last decade.



Non-Residential Square Footage

Nonresidential permitting also plays a role in growth analysis. Nonresidential permits include everything that is not residential, like: industrial, commercial, nonprofit & public buildings, and replacement or remodeling of existing nonresidential structures. Also included are vested and ROGO exempt hotels, motels, campgrounds, marinas and other commercial facilities.

With very little industrial and agricultural activity in the Keys, the predominant form of nonresidential development is commercial. In Monroe County, there are two primary types of commercial development: retail trade and services (which



includes tourism-related development such as marinas and restaurants). Therefore, the impact of nonresidential development on public facilities varies significantly based on the type of commercial use.

Nonresidential and residential development tends to fuel one another. Residential populations provide markets for nonresidential activities. Nonresidential development, in turn, helps to drive population growth by providing services and employment. Certain types of nonresidential development also concentrate the demand for public facilities within certain locations and during peak periods.

The Monroe County Building Department tracks the number of nonresidential permits by subdistrict in unincorporated Monroe County. In addition to the number of permits, the Building Department tracks the amount of square footage affected in each nonresidential building permit issued.

Figure 1.15, on the following page, shows the trends in nonresidential permitting from 1992 to 2002. The subdistricts shown in the chart do not directly correspond to the service areas mandated in section of 9.5-292 of the Land Development Regulations. Refer to the boundary descriptions found in Figure 1.11 of this report to compare the two areas. Five hundred and seventy-one more non-residential building permits were issued in 2002 than in 2001.



Figure 1.15 - New and Redevelopment Nonresidential Permits by Year		
	# of Permits Issued	Sq. Area (Sq. Ft.)
1992		
Upper Keys	15	40,506
Middle Keys	2	7,263
Lower Keys	5	1,529
Subtotal	22	49,298
1993		
Upper Keys	4	16,334
Middle Keys	4	24,812
Lower Keys	4	27,236
Subtotal	12	68,382
1994		
Upper Keys	4	24,648
Middle Keys	7	31,079
Lower Keys	4	0
Subtotal	15	55,727
1995		
Upper Keys	24	147,319
Middle Keys	12	109,331
Lower Keys	8	10,004
Subtotal	44	266,654
1996		
Upper Keys	17	102,795
Middle Keys	6	93,334
Lower Keys	2	14,149
Subtotal	25	210,278
1997		
Upper Keys	14	93,503
Middle Keys	83	8,420
Lower Keys	2	18,327
Subtotal	99	120,250
1998		
Upper Keys	4	60,936
Middle Keys	73	16,304
Lower Keys	1	24,152
Subtotal	78	101,392
1999		
Upper Keys	8	14,861
Middle Keys	68	84,715
Lower Keys	1	2,054
Subtotal	77	101,630
2000		
Upper Keys	8	33,873
Middle Keys	68	75,584
Lower Keys	5	19,168
Subtotal	81	128,625
2001		
Upper Keys	31	73,307
Middle Keys	1	4,998
Lower Keys	4	8,575
Subtotal	36	86,880
2002		
Upper Keys	3	3,773
Middle Keys	0	0
Lower Keys	26	110,805
Subtotal	29	114,578
TOTALS	518	1,303,694

Source: Monroe County Building Department, 2003



Figure 1.16 shows the relative amount of square footage permitted in each of the three service areas from 1992 to 2002.

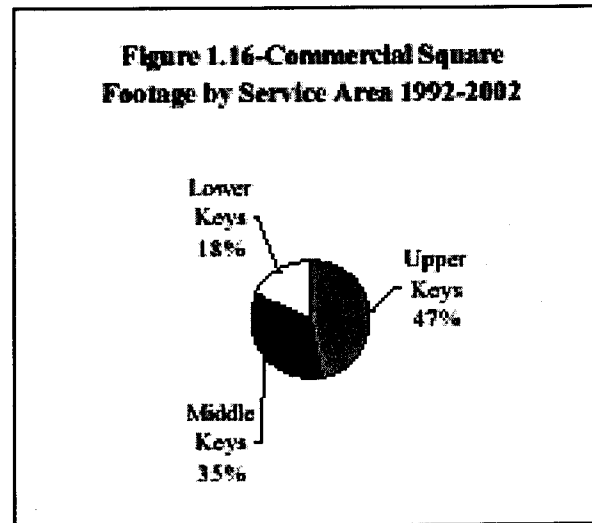
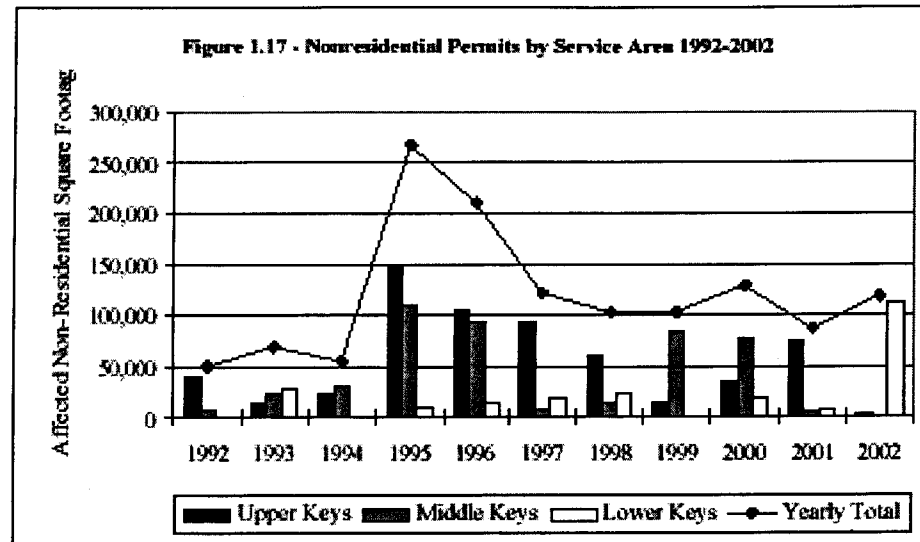


Figure 1.17 shows the trends in the amount of nonresidential permitting activity have fluctuated throughout the last decade. The permitting activity based on square footage affected generally declined from 1990 through 1994 with a major jump in affected area occurring in 1995 which resulted from the knowledge of an impending implementation of a nonresidential permit allocation system similar to the ROGO system for residential development. Non-residential development has slightly declined since 2000 as the amount of development in the Upper, Middle, and Lower Keys has fluctuated.





Since residential development is constrained through the Rate of Growth Ordinance and the Permit Allocation System, it was thought that nonresidential (commercial) development should also be constrained in the interest of maintaining a balance of land uses.

At the time the Comprehensive Plan was prepared in 1991, 17.6% of the land was under residential use, while 4.6% was used for commercial development as indicated in Table 2.1, Monroe County Existing Land Uses, in the Monroe County Year 2010 Comprehensive Plan Technical Document. It was determined that this balance was appropriate given the knowledge available at the time the Comprehensive Plan was prepared.

To assure that balance was maintained, the Comprehensive Plan proposed Policy 101.3.1, which states:

"Monroe County shall maintain a balance between residential and nonresidential growth by limiting the gross square footage of nonresidential development over the 15 year planning horizon in order to maintain a ratio of approximately 239 square feet of nonresidential development for each new residential unit permitted through the Permit Allocation."



In other words, the Comprehensive Plan limits the square footage of new commercial development that may be permitted. The commercial square footage allocation is 239 square feet for each (1) new residential permit issued. This equates to around 24,968 square feet of new commercial development per year throughout unincorporated Monroe County.

Between adoptions of the 2010 Comprehensive Plan on April 15, 1993, and December 31, 2001 permits were issued for 462,529 square feet of non-residential floor space, which was not exempted from the comprehensive plan defined non-residential permit allocation system. This amount of non-residential floor space includes permits for development within the Village of Islamorada and City of Marathon prior to their respective incorporation.

Of the total square feet permitted, 276,641 square feet was permitted after April 15, 1993 (adoption of the 2010 Comprehensive Plan) and prior to January 4, 1996. The remaining 185,888 square feet was permitted after that date for projects vested from the non-residential permit allocation system provisions of the 2010 Comprehensive Plan.

The BOCC adopted NROGO in September 2001. The approval was challenged, but subsequently a settlement was reached and NROGO became effective November 2002. Applicants were requesting 18,222 square footage of floor area for the year 10 NROGO allocation. There was 44,292 SF of non-residential floor area available for year 10 (July 2001 - July 2002). The BOCC approved 22,150 SF to be allocated for year 10. The first allocation period closed in August 2002 and the second allocation period closed in November 2002. Therefore, there is a total of 26,090 SF that can be carried over to year 11.

In March 2003, the Monroe County Planning Commission approved non-residential floor area for year 11. A total of 5,300 commercial square feet was requested by applicants for year 11. Based on the BOCC a total of 16,000 square feet of NROGO allocation is available for new non-residential development.

Summary

To summarize, this growth analysis is based upon projected changes in population as well as residential and nonresidential permitting in unincorporated Monroe County.

There are two groups that compose the population in Monroe County: the permanent resident population, and the peak seasonal population. The sum of these two groups gives the functional population or the maximum number of people in the Keys on any given evening.



The functional population of all Monroe County is expected to grow by more than 6,000 people from 1990 to 2015, an increase of 11% over the period. Planning Department projections show the rate of increase in functional population is expected to slow after the year 2000.

The functional population of unincorporated Monroe County is expected to reach 75,219 people in 2003, a decrease of 27% from 1990 due to the incorporations of Islamorada in 1997 and Marathon in 1999. The Upper Keys portion of unincorporated Monroe County accounts for 49.3% of the unincorporated functional population, while the Lower Keys portions accounts for 45.3% in 2003. These percentages are expected to remain relatively constant through 2015.

The permanent population of all of Monroe County, according to the 2000 Census was reported as 79,529, an increase of 1,787 from the 1990 Census. This is 6,093 less than the projected 2000 population.

In terms of the number of residential permits, a total of 270 residential permits (including vested or ROGO exempt hotel rooms) were issued in 2002, a slight increase from 2001.

From 1992 to 2002, 80% of the residential permits (2,544) were issued to single family residences, while only 10% (335) were issued for multifamily, duplex, or mobile homes. A total of 193 permits (70%) were issued for single family residences in 2002.

The current rate of growth guidelines indicate that unincorporated Monroe County has a total of 182 permits it may issue during the ROGO year (not including the additional 90 replacement affordable housing units which were allowed by the DCA based upon the lower enclosure removal program). After the incorporation of Marathon, this number fell to 158 permits a year.

The Nonresidential Rate of Growth Ordinance (NROGO) was approved and became effective in November 2002. Based on the BOCC a total of 16,000 square feet of NROGO allocation is available for new non-residential development in year 11.



**MONROE COUNTY
EVALUATION AND APPRAISAL REPORT (EAR)
ASSESSMENT OF PUBLIC FACILITIES CAPACITY**

INTRODUCTION

One of the requirements in the EAR is an assessment of how the community has been able to meet the demands of growth on infrastructure, maintain level of service standards, provide public services and facilities, concurrency management, and the financial feasibility of the plan.

This section is mainly taken from the annual assessment of public facilities capacity mandated by Section 9.5-292 of the Monroe County Land Development Regulations (LDRs). Section 9.5-292(a) of the LDRs pertains to the minimum standards for public facilities for the following facilities: roads, solid waste, potable water, and schools. Although it is not listed in the LDRs as one of the services to be evaluated, this report includes an evaluation of parks and recreational facilities using the LOS established in the Comprehensive Plan for analysis.

The available capacity for each of these facilities may be either sufficient to accommodate projected growth over the next year, marginally adequate, or inadequate. In situations where public facilities serving an area are projected to be only marginally adequate or inadequate over the next year, the Code sets out a review procedure to be followed when issuing development permits in that area.

Service Areas

Section 9.5-292(b)(2) of the Code divides unincorporated Monroe County into three service areas for the purposes of assessing potential growth and how public facilities can accommodate that growth.

The Upper Keys service area includes all unincorporated Monroe County north of the Tavernier Creek Bridge. The Middle Keys service area includes the area between the Seven-Mile Bridge and the Tavernier Creek Bridge. The Lower Keys is Unincorporated Monroe County south of the Seven Mile Bridge.



TRANSPORTATION FACILITIES

This section of the public facilities analysis investigates the current capacity of the transportation network in Monroe County. This analysis includes changes in traffic volumes, the level of service on U.S. 1, the reserve capacity of the highway and county roads, and the Florida Department of Transportation Five Year Work Program for Monroe County.

Roads are one of the four critical public facilities identified for annual assessment in the Land Development Regulations. In fact, roads are the only public facility with clear and specific standards for level of service measurements identified in the Land Development Regulations and Comprehensive Plan. The regulations require all segments of U.S. 1 to remain at a level of service of 'C', and all County roads to remain at a level of service 'D'. Subsequent portions of this section will explain the level of service measurements, and how the level of service is calculated.

Existing Roadway Facilities

Monroe County's roadway transportation system is truly unique. Nowhere else is there a chain of islands over 100 miles long connected by 42 bridges along a single highway. This single highway, the Overseas Highway (U.S. 1), functions as a collector, an arterial, and the "Main Street" for the Keys. U.S. 1 is a lifeline for the Keys, from both economic and public safety perspectives. Each day it carries food, supplies, and tourists from the mainland. In the event of a hurricane, it is the only viable evacuation route to the mainland for most of Monroe County.

U.S. 1 in Monroe County is predominantly a two-lane road. Of its 112 total miles, approximately 80 miles (74%) are two-lane segments that are undivided. The four-lane sections are located on Key Largo, Tavernier (MM 90 to 106), the Marathon area (MM 48 to 54), Bahia Honda (MM 35 to 37), and from Key West to Boca Chica (MM 2 to 9).

In addition to U.S. 1, there are 450 miles of County (secondary) roads with 38 bridges. U.S. 1 and the County (secondary) roads have a combined total of approximately 340 intersections in the Keys. The Monroe County Division of Public Works is charged with maintaining and improving secondary roads which are located within the boundaries of unincorporated Monroe County. The Florida Department of Transportation (FDOT) is responsible for maintaining U.S. 1.



Figure 2.1 identifies the traffic signals in operation along the U.S. 1 corridor (excluding those found on the island of Key West).

Figure 2.1 - Fully-Signalized Intersections		
Mile Marker	Key	Street
4.4	Stock Island	College Road
4.6	Stock Island	Cross Street
4.8	Stock Island	MacDonald Avenue
30.3	Big Pine Key	Key Deer Blvd.
48.5	Marathon	School Crossing
50	Marathon	Sombrero Beach Blvd.
52.4	Marathon	107th Street
52.5	Marathon	109th Street
53	Marathon	Pedestrian Crossing
53.5	Fat Deer Key	Key Colony Causeway
54	Fat Deer Key	Coco Plum Drive
90	Plantation Key	Woods Avenue
90.5	Plantation Key	Sunshine Road
91.5	Tavernier	Ocean Boulevard
99.5	Key Largo	Atlantic Boulevard
101	Key Largo	Tradewinds
105	Key Largo	Pedestrian Crossing
Source: 2004 Arterial and Travel Time/ Delay Study, URS Inc.		

Traffic Volumes

Traffic counts can be very useful in assessing the capacity of the road network, and help determine when capacity improvements need to be made. The two primary measurements for determining traffic volumes are the average daily traffic in an area (referred to as an "ADT"), and the annual average daily traffic (referred to as an "AADT"). Average daily traffic counts are collected from both directions over seven twenty-four hour periods which usually include a weekend.



The amount of traffic counted over the week is then divided by five or seven to yield the average daily traffic for a particular location. The "5-day ADT" measurement considers only weekdays, and the "7-day ADT" includes the weekend. The ADT information can then be used in a formula called a "weekly factor" to estimate the annual average daily traffic, which is an estimate of the average amount of traffic at a particular location on any given day of the year.

In Monroe County, traffic counts have been conducted in the same locations since 1992. These counts occur at Mile Marker 84 on Upper Matecumbe, Mile Marker 50 in Marathon, and at Mile Marker 30 on Big Pine Key. The counts are usually performed during the six-week peak tourist season which begins in the second week of February. This year's counts were completed between March 1 and March 21, 2004. Figure 2.2, compares the traffic counts for 2004 with those for 2003.

The average weekday (5-Day ADT), average weekly (7-Day ADT), and the annual average daily traffic (AADT) volumes, compared to last year, have increased at the Marathon and Upper Matecumbe locations. While the 5-Day ADT, 7-Day ADT and the AADT, when compared to last year, have decreased at the Big Pine location.

Figure 2.2 - Traffic Counts for 2003 and 2004			
	2003	2004	% Change
<i>Big Pine Key (MM 30)</i>			
5-Day ADT	23,341	23,108	-1.00%
7-Day ADT	22,788	22,538	-1.10%
AADT	22,788	22,538	-1.10%
<i>Marathon (MM 50)</i>			
5-Day ADT	36,817	37,604	2.14%
7-Day ADT	35,984	36,563	1.61%
AADT	31,763	32,274	1.61%
<i>Upper Matecumbe (MM 84)</i>			
5-Day ADT	26,759	27,194	1.63%
7-Day ADT	26,514	27,561	3.95%
AADT	23,404	24,328	3.95%
Source: 2004 Arterial and Travel Time/ Delay Study, URS Inc.			



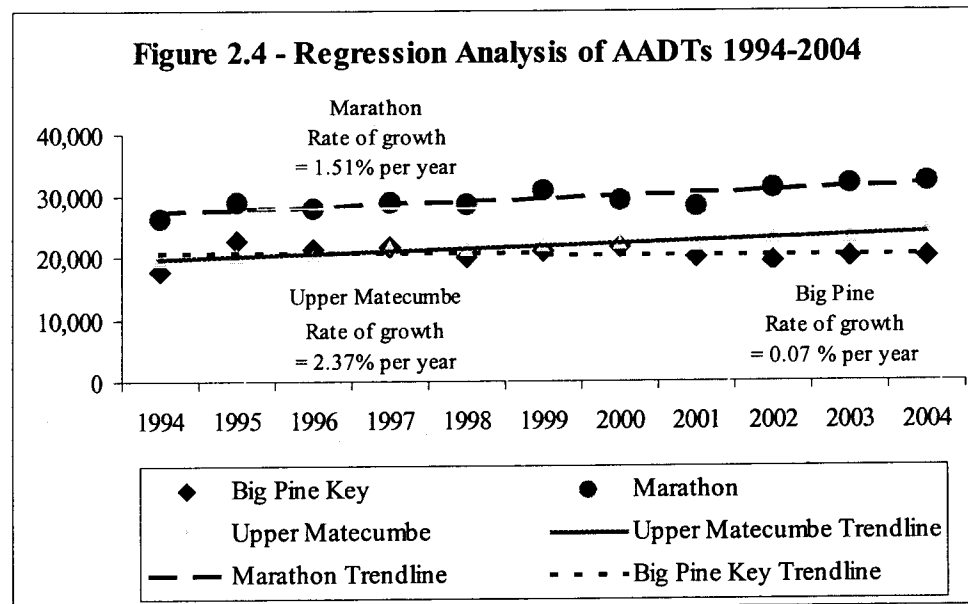
A detailed historical comparison of the AADT traffic counts at all three locations for the period from 1994 to 2004 is shown in Figure 2.3.

Figure 2.3 -Historical Comparison of AADTs 1994-2004											
Area	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Big Pine Key	17,743	22,688	21,186	21,496	19,866	20,843	21,774	19,991	19,364	20,115	19,894
Marathon	26,297	28,927	27,924	28,930	28,651	30,750	29,017	28,340	31,285	31,763	32,274
Upper Matecumbe	19,593	20,473	20,083	21,599	21,301	22,103	22,410	21,819	23,369	23,404	24,328
Source: 2004 Arterial and Travel Time/ Delay Study, URS Inc.											

Figure 2.3 shows that the Marathon location consistently records the highest traffic volumes throughout the period, with counts generally in the upper 20,000 to 30,000 range. The AADT counts for Big Pine hover in the low 20,000 range over the period. Meanwhile Upper Matecumbe has been gradually increasing from 1994 to 2004 from a range of 20,000 up to around 25,000.

A regression analysis of the AADT at each of the three locations over the last eleven years indicate that traffic volumes in the Big Pine Key segment have been increasing at a rate of 0.07% per year. Traffic volumes in the Marathon and Upper Matecumbe segments of U.S. 1 have been increasing at a rate of 1.51% and 2.37% per year respectively. The Big Pine Key rate of growth is lower, while the Marathon and Upper Matecumbe rates of growth are higher than last year's. U.S. 1 historic traffic growth is depicted in a regression analysis graph in Figure 2.4.





Level of Service Background

Monroe County has conducted travel time and delay studies of U.S. 1 on an annual basis since 1991. The primary objective of the U.S. 1 Arterial Travel Time and Delay Study is to monitor the level of service on U.S. Highway 1 for concurrency management purposes pursuant to Chapter 163, Florida Statutes and Section 9.5-292 of the Land Development Regulations. The study utilizes an empirical relationship between the volume-based capacities and the speed-based level of service methodology developed by the U.S. 1 Level of Service Task Force.

The U.S. 1 Level of Service Task Force is a multi-agency group with members from Monroe County, the Florida Department of Transportation, and the Florida Department of Community Affairs. A uniform methodology was developed in 1993 and amended December 1997. The methodology adopted considers both the overall level of service from Key West to the mainland, and the level of service on 24 selected segments. The methodology was developed from basic criteria and principles contained in Chapters 7 (Rural Multilane Highways), Chapter 8 (Rural Two-Lane Highways) and



Chapter 11 (Urban and Suburban Arterials) of the 1985 Highway Capacity Manual.

Overall Level of Service on U.S. 1

Overall speeds are those speeds recorded over the 108-mile length of the Keys between Key West and Miami-Dade County. Overall speeds reflect the conditions experienced by long distance traffic traveling the entire length of the Keys. Given that U.S. 1 is the only principal arterial in unincorporated Monroe County, the movement of long distance traffic is an important consideration.

The overall level of service or capacity of the entire length of U.S. 1 is measured in the average speed of a vehicle traveling from one end to the other of U.S. 1. The level of service (LOS) criteria for overall speeds on U.S. 1 in Monroe County, as adopted by the U.S. 1 Level of Service Task Force, are as follows:

- LOS A = 51 mph or greater
- LOS B = 48 mph to 50.9 mph
- LOS C = 45 mph to 47.9 mph
- LOS D = 42 mph to 44.9 mph
- LOS E = 36 mph to 41.9 mph
- LOS F = below 36 mph

Both Monroe County and the Florida Department of Transportation have adopted a level of service 'C' standard for the overall length of U.S. 1. In other words, a vehicle traveling from Mile Marker 4 to Mile Marker 112 (or vice versa) must maintain an average speed of at least 45 mph to achieve the level of service 'C' standard.

The median overall speed during the 2004 study was 45.4 mph, which is 0.7 mph lower than the 2003 median speed of 46.1 mph. The mean operating speed was 45.1 mph with a 95% confidence interval of plus or minus 0.8 mph. All of these measurements correspond to LOS C conditions. The highest overall speed recorded in the study was 47.9 mph (1.1 mph lower than 2003 highest overall speed), which occurred on Wednesday, March 10, 2004 between 11:00 a.m. and 1:30 p.m., in the northbound direction. The lowest overall speed recorded was 39.3 mph (2.2 mph lower than the 2003 lowest overall speed), which occurred on Saturday March 13, 2004 between 9:30 a.m. and 12:29 a.m. in the southbound



direction. Figure 2.5 shows that the overall median speed for U.S. 1 has remained between 45.4 mph and 47.8 from 1992 to the present. Should the overall median speed fall ever below 45 mph (the minimum LOS C standard), then the U.S. 1 capacity would be considered inadequate.

Figure 2.5 - Changes in Overall Median Speed			
Year	Median Speed	Level of Service	Numeric Change in Speed
1992	46.9	C	-
1993	47.4	C	0.5
1994	47.3	C	-0.1
1995	47.8	C	0.5
1996	47.1	C	-0.7
1997	46.5	C	-0.7
1998	45.7	C	-0.8
1999	46.7	C	1
2000	46.4	C	-0.3
2001	46.9	C	1
2002	47.1	C	-0.2
2003	46.1	C	-1
2004	45.4	C	-0.7
Source: 2004 Arterial and Travel Time/ Delay Study, URS Inc.			

Level of Service on U.S. 1 Segments

In addition to a determination of the overall capacity throughout the entire 108 mile length of U.S. 1 between Mile Marker 4 and 112, Section 9.5-292 of the Land Development Regulations requires that the capacity of portions or "segments" of U.S. 1 also be assessed annually. There are a total of twenty four (24) segments of U.S. 1 from Mile Marker 4 to Mile Marker 112. A description of the segment boundaries can be found in Figure 2.6 on the following page. The segments were defined by the U.S. 1 Level of Service Task Force to reflect roadway cross sections, speed limits, and geographical boundaries.



Figure 2.6 - Description of US 1 Roadway Segments						
Segment	Mile Marker Range		Control Points		Key(s)	Approx. PAED
Number	Begin	End	Begin	End		
1	4	5	Cow Key Bridge (N)	Key Haven Boulevard	Stock Island, Key Haven	1
2	5	9	Key Haven Boulevard	Rockland Drive	Boca Chica, Rockland	2
3	9	10.5	Rockland Drive	Boca Chica Road	Big Coppitt	2
4	10.5	16.5	Boca Chica Road	Harris Channel Bridge (N)	Shark, Saddlebunch	3
5	16.5	20.5	Harris Channel Bridge (N)	Bow Channel Bridge (N)	Lower & Upper Sugarloaf	3
6	20.5	23	Bow Channel Bridge (N)	Spanish Main Drive	Cudjoe	4A
7	23	25	Spanish Main Drive	East Shore Drive	Summerland	4A
8	25	27.5	East Shore Drive	Torch-Ramrod Bridge (S)	Ramrod	4A
9	27.5	29.5	Torch-Ramrod Bridge (S)	N. Pine Channel Bridge (N)	Little Torch	4A
10	29.5	33	N. Pine Channel Bridge (N)	Long Beach Drive	Big Pine	5
11	33	40	Long Beach Drive	7- Mile Bridge (S)	W. Summerland, Bahia Honda, Ohio	6
12	40	47	7- Mile Bridge (S)	7- Mile Bridge (N)	7-Mile Bridge	6
13	47	54	7- Mile Bridge (N)	Cocoa Plum Drive	Vaca, Key Colony Beach	7
14	54	60.5	Cocoa Plum Drive	Toms Harbor Ch Bridge (S)	Fat Deer Crawl, Grassy	8
15	60.5	63	Toms Harbor Ch Bridge (S)	Long Key Bridge (S)	Duck, Conch	10
16	63	73	Long Key Bridge (S)	Channel #2 Bridge (N)	Long, Fiesta, Craig	11
17	73	77.5	Channel #2 Bridge (N)	Lignumvitae Bridge (S)	Lower Matecumbe	12A
18	77.5	79.5	Lignumvitae Bridge (S)	Tea Table Relief Bridge (N)	Fill	12A
19	79.5	84	Tea Table Relief Bridge (N)	Whale Harbor Bridge (S)	Upper Matecumbe	13
20	84	86	Whale Harbor Bridge (S)	Snake Creek Bridge (N)	Windley	12B
21	86	91.5	Snake Creek Bridge (N)	Ocean Boulevard	Plantation	14
22	91.5	99.5	Ocean Boulevard	Atlantic Boulevard	Tavernier	15 & 16
23	99.5	106	Atlantic Boulevard	C-905	Key Largo	17 - 20
24	106	112.5	C-905	County Line Sign	Key Largo, Cross Key	22
NOTE: (N) and (S) refer to the north and south side of the bridges respectively						
Source: 2004 Arterial and Travel Time/ Delay Study, URS Inc.						



The capacity or level of service for a U.S. 1 segment is measured in median speeds, similar to the overall capacity measurement. Segment speeds are the speeds recorded within individual links of U.S. 1, and reflect the conditions experienced during local trips. However, the determination of the median speed on a segment is a more involved process than determining the overall level of service since different segments have different conditions. Segment conditions depend on the flow characteristics and the posted speed limits within the given segment.

The Land Development Regulations require each segment of the highway to maintain a level of service of 'C' or better. The level of service criteria for segment speeds on U.S. 1 in Monroe County depends on the flow characteristics and the posted speed limits within the given segment. Flow characteristics relate to the ability of a vehicle to travel through a particular segment without being slowed or stopped by traffic signals or other devices. Segments with a series of permanent traffic signals or other similar traffic control devices in close proximity to each other are considered to be "Interrupted Flow Segments", and are expected to have longer travel times due to the delays caused by these signals or control devices. Roadway segments without a series of signals or control devices are considered to be "Uninterrupted Flow Segments". Uninterrupted segments may have one or more traffic signals, but they are not in close proximity to one another as in the interrupted segment case. The methodology used to determine median speed and level of service on a particular segment is based upon that segment's status as an interrupted or uninterrupted flow segment. The criteria, listed by type of flow characteristic, are explained in Figure 2.7.

Figure 2.7 - Level of Service Standards Based on Flow Characteristics		
Level of Service	Interrupted Flow Segment	Uninterrupted Flow Segment
A	≥ 35 mph	≥ 1.5 mph above speed limit
B	≥ 28 mph	1.4 mph above to 1.5 mph below speed limit
C	≥ 22 mph	1.6 mph below to 4.5 mph below speed limit
D	≥ 17 mph	4.6 mph below to 7.5 mph below speed limit
E	≥ 13 mph	7.6 mph below to 13.5 mph below speed limit
F	< 13 mph	> 13.5 mph below speed limit
Source: 2004 Arterial and Travel Time/ Delay Study, URS Inc.		



The Marathon and the Stock Island segments are considered "interrupted" flow facilities, the remainder of the segments are considered uninterrupted. For all "uninterrupted" segments containing isolated traffic signals, the travel times were reduced by 25 seconds to account for lost time due to signals.

The segments, 2003 and 2004 median travel speeds, and the 2003 and 2004 LOS are shown on the next page in Figure 2.8. The median segment speeds recorded a range from 58.0 mph in the Boca Chica segment to 32.0 mph in the Stock Island segment. LOS ranged from A to D. Compared to last year's (2003) study results, there are level of service changes to eight segments, three resulted in positive level of service changes while five resulted in negative level of service changes.

Compared to 2003, the median segment speeds decreased in fourteen (14) of the twenty-four (24) segments ranging between 0.2 mph to 3.8 mph lower. Eight segments experienced an increase in median speeds, ranging from 0.2 mph to 1.5 mph, compared to last year's data.

None of the changes in speed could be attributed to any specific change in conditions except the changes in traffic volumes and minor signal timings.



Figure 2.8 - US 1 Segment Status, Median Speeds, and Change 2003-2004

#	Segment	2003 LOS	2004 LOS	2003 Median Speed	2004 Median Speed	Numeric Change
1	Stock Island	A	B	35.8	32.0	-3.8
2	Boca Chica	A	A	58.0	58.2	0.2
3	Big Coppitt	C	C	46.1	46.1	0.0
4	Saddlebunch	C	B	52.3	53.7	1.4
5	Sugarloaf	C	C	47.9	48.3	0.4
6	Cudjoe	A	A	47.5	48.1	0.6
7	Summerland	B	B	45.3	46.4	1.1
8	Ramrod	A	B	46.7	46.4	-0.3
9	Torch	A	A	47.2	47.6	0.4
10	Big Pine	C	C	39.7	38.4	-1.3
11	Bahia Honda	A	B	54.2	52.5	-1.7
12	7-Mile Bridge	B	C	54.3	53.1	-1.2
13	Marathon	A	A	38.2	35.2	-3.0
14	Grassy	C	C	50.9	50.3	-0.6
15	Duck	C	B	53.0	54.4	1.4
16	Long	B	B	52.3	52.9	0.6
17	L. Matecumbe	D	C	50.1	50.5	0.4
18	Tea Table	D	D	49.2	49.0	-0.2
19	U. Matecumbe	C	C	41.7	40.9	-0.8
20	Windley	A	A	42.2	41.8	-0.4
21	Plantation	B	C	41.3	40.0	-1.3
22	Tavernier	A	A	49.9	48.3	-1.6
23	Largo	A	A	48.4	45.5	-2.9
24	Cross	D	D	46.2	45.0	-1.2
Overall		C	C	46.1	45.4	-0.7
Source: 2004 Arterial and Travel Time/ Delay Study, URS Inc.						



Reserve Capacities

The median overall speed of U.S. 1 in 2004 is 45.4 mph, which is a decrease of 0.7 mph from the 2003 overall median speed of 46.1 mph. The difference between the median speed and the LOS C standard gives the reserve speed, which is converted into an estimated reserve capacity of additional traffic volume and corresponding additional development. The median overall speed of 45.4 mph compared to the LOS C standard of 45 mph leaves an overall reserve speed of .4 mph. The reserve speed is then converted into an estimated reserve capacity (**7,419 daily trips**).

The estimated reserve capacity is then converted into an estimated capacity for additional residential development (**1,159 units**), assuming balanced growth of other land uses. Applying the formula for reserve volume to each of the 24 segments of U.S. 1 individually gives maximum reserve volumes for all segments totaling 85,986 trips. These individual reserve volumes may be unobtainable, due to the constraints imposed by the overall reserve volume.

As stated earlier, the Land Development Regulations mandate a minimum level of service of 'C' for all roadway segments of U.S. 1. However, county regulations and FDOT policy allow segments that fail to meet LOS C standards to receive an allocation not to exceed five percent below the LOS C standard. The resulting flexibility will allow a limited amount of additional land development to continue until traffic speeds are measured again next year or until remedial actions are implemented. These segments are candidates for being designated either "backlogged" or "constrained" by FDOT. Applications for new development located within backlogged or constrained segments are required to undergo a thorough traffic analysis as part of the review process.

Based on this year's results, Tea Table (Segment 18), and Cross Key (Segment 24) are below the LOS C threshold, consistent with past two years of data. However, both segments have reserve capacities within the 5% allocation. Although both segments have reserve capacities within the 5% allocation, continuous degradation of travel speeds in these segments should be of concern. The travel speeds on Cross Key segment is likely to improve with the implementation of a high level fixed bridge, construction of which is anticipated to begin early next year. The Tea Table segment does not have any planned improvements to curtail the travel speed reductions. Florida Department of Transportation and/or Monroe County should conduct a special study along this segment to determine what improvements, if any can be implemented to improve the declining travel speeds. A detailed summary table displaying



level of service and reserve capacity values for each segment is contained in Figure 2.9.

Figure 2.9. 2004 Level of Service and Reserve Capacity

						ADJ.		ADJUSTED		MEDIAN			2004		
	SEGMENT	LENGTH	FACILITY		POSTED SPEED		FOR		LOS C		TRAVEL	LOS	RESERVE	MAXIMUM RESERVE	5% ALLOCATION
		(miles)	TYPE		Limits	Average	SIGNAL		CRITERIA		SPEED		SPEED	VOLUME	BELOW LOS C
					(mph)	(mph)	(mph)		(mph)		(mph)		(mph)	(trips)	(trips)
1	Stock Island (4.0 - 5.0)	1.1	4-L/D		30/35/45	38.3	N/A		22.0		32.0	B	10.0	8,456	N/A
2	Boca Chica (5.0- 9.0)	3.9	4-L/D		55/45	54.1	N/A		49.6		58.2	A	8.6	5,577	N/A
3	Big Coppitt (9.0- 10.5)	1.5	2-L/U		45/55	49.7	N/A		45.2		46.1	C	0.9	231	N/A
4	Saddlebunch (10.5- 16.5)	5.8	2-L/U		45/55	54.1	N/A		49.6		53.7	B	4.1	3,945	N/A
5	Sugarloaf (16.5- 20.5)	4.0	2-L/U		45/55	52.1	N/A		47.6		48.3	C	0.7	489	N/A
6	Cudjoe (20.5- 23.0)	2.5	2-L/U		45/55	45.5	N/A		41.0		48.1	A	7.1	2,928	N/A
7	Summerland (23.0- 25.0)	2.2	2-L/U		45	45.0	N/A		40.5		46.4	B	5.9	2,151	N/A
8	Ramrod (25.0- 27.5)	2.3	2-L/U		45	45.0	N/A		40.5		46.4	B	5.9	2,251	N/A
9	Torch (27.5- 29.5)	2.1	2-L/U		45	45.0	N/A		40.5		47.6	A	7.1	2,478	N/A
10	Big Pine (29.5- 33.0)	3.4	2-L/U		45	45.0	3.3		37.2		38.4	C	1.2	659	N/A
11	Bahia Honda (33.0- 40.0)	7.0	2-L/U (70%)		45/50/55	52.1	N/A		47.6		52.5	B	4.9	5,698	N/A
			4-L/D (30%)												
12	7-Mile Bridge (40.0- 47.0)	6.8	2-L/U		55	55.0	N/A		50.5		53.1	C	2.6	2,881	N/A
13	Marathon (47.0- 54.0)	7.3	2-L/U (13%)		35/45	42.2	N/A		22		35.2	A	13.2	16,000	N/A



			4-L/D (87%)										
14	Grassy (54.0- 60.5)	6.4	2-L/U	45/55	54.4	N/A	49.9	50.3	C	0.4	389	N/A	
15	Duck (60.5- 63.0)	2.7	2-L/U	55	55.0	N/A	50.5	54.4	B	3.9	1,735	N/A	
16	Long (63.0- 73.0)	9.9	2-L/U	55/45	53.5	N/A	49	52.9	B	3.9	6,452	N/A	
17	L Matecumbe (73.0- 77.5)	4.5	2-L/U	55	55.0	N/A	50.5	50.5	C	0.0	0	1,881	
18	Tea Table (77.5- 79.5)	2.2	2-L/U	55/45	54.6	N/A	50.1	49.0	D	-1.1	0	512	
19	U Matecumbe (79.5- 84.0)	4.1	2-L/U	45	45.0	N/A	40.5	40.9	C	0.4	257	N/A	
20	Windley (84.0- 86.0)	1.9	2-L/U	45	45.0	7.6	32.9	41.8	A	8.9	2,814	N/A	
21	Plantation (86.0- 91.5)	5.8	2-L/U	45	45.0	2.3	38.2	40.0	C	1.8	1,753	N/A	
22	Tavernier (91.5- 99.5)	8.0	4-L/D	45/50	47.1	1.0	41.6	48.3	A	6.7	8,918	N/A	
23	Key Largo (99.5- 106.0)	6.8	4-L/D	45	45.0	3.4	37.1	45.5	A	8.4	9,492	N/A	
24	Cross (106.0- 112.5)	6.2	2-L/U	45/55	51.8	N/A	47.3	45.0	D	-2.3	0	67	
	Overall	108.4					45.0	45.4	C	0.4	85,554		

When no additional trips can be allocated to a particular roadway segment, then it is considered as "inadequate" from a public facility standpoint. The Land Development Regulations indicate that no additional development which could impact an inadequate public facility may be permitted. No facilities were designated as "inadequate" under this guideline.

In addition to the requirement that areas with inadequate public facilities be identified in the annual assessment, the Land Development Regulations also require those areas with marginally adequate public facilities to be identified. For the purposes of this report, U.S. 1 segments with reserve speeds of less than or equal to 3 mph (Figure 2.9) in 2004 will be



considered as "marginally adequate".

This year's report indicates that ten segments are "marginally adequate" and any applications for new development which would generate traffic in marginally adequate areas must submit a detailed traffic report for consideration during review. Please see Figure 2.10 for "marginally adequate" facilities.

Figure 2.10 "Marginally Adequate" Segments			
#	Name	Mile Marker Range	Reserve Speed
3	Big Coppitt	9.0 - 10.5	0.9
5	Sugarloaf	16.5 - 20.5	0.7
10	Big Pine	29.5 - 33.0	1.2
12	7-Mile Bridge	40.0 - 47.0	2.6
14	Grassy	54.0 - 60.5	0.4
17	Lower Matecumbe	73.0 - 77.5	0
18	Tea Table	77.5 - 79.5	-1.1
19	Upper Matecumbe	79.5 - 84.0	0.4
21	Plantation	86.0 - 91.5	1.8
24	Cross	106 - 112.5	-2.3
Source: 2004 Arterial and Travel Time/ Delay Study, URS Inc.			

Level of Service on County Roads

Section 9.5-292 of the Land Development Regulations establishes a level of service standard of LOS D for all County roads, as measured on a volume or annual average daily traffic (AADT) basis. All of the County roads examined are operating at or above the County standard of LOS D.

Improvements to Roadway Facilities

Major improvements scheduled for U.S. 1 are outlined in the Florida Department of Transportation Five-Year Work Program. The major project for unincorporated Monroe County in the current FDOT Work Program (2004/2005 to



2008/09) is to replace the Jewfish Creek drawbridge with a high-level fixed-span bridge and the installation of culverts to improve the tidal flow to the surrounding wetlands. The construction phase for this project is scheduled for 2004/05.

Additionally, the 18 mile stretch between the Jewfish Creek Bridge and Florida City is also scheduled for reconstruction beginning in 2004/05. These road projects are pending final approval of environmental permits.

Another major project on the 5-year Work Program is the reconstruction of the Card Sound Road/County Road 905 intersection scheduled for 2007/08.

Other road projects in the current FDOT Work Program include the preliminary engineering phase for adding a center turn lane on US-1 at Big Coppitt Key, Knights Key (MM 46.9-49.1), Grassy Key (MM 57.5-59.9), Long Key (MM 65.3-66.0), and Plantation Key (MM 85.7-86.7). These projects are scheduled to begin construction in 2006, with the exception of Long Key and Plantation Key, which are scheduled for construction in 2007/08.

In addition to the turn lane projects, numerous resurfacing projects are scheduled throughout the Keys over the span of the 5-year Work Plan.

In addition to the road projects on U.S. 1, the construction of different segments of the Florida Keys Overseas Heritage Trail are included in the current 5-year Work Plan. These construction projects include:

- the segment from MM 5.2-Key Haven to MM 9.6-Big Coppitt Key
- the segment from MM 16.5-Sugarloaf Key to MM 24.5-Summerland Key
- the segment from MM 25-Summerland Key to MM 26.2-Ramrod Key
- the segment from MM 26.2-Ramrod Key to 29.9 Big Pine Key,
- the segment from MM 33.3 Spanish Harbor Bridge to MM 40.5 (south end of the 7-mile bridge),
- the segment from MM 59.2 on Grassy Key to MM 65.2 Long Key
- the segment from City of Layton MM 68.4 to MM 70.8-Channel 5 Bridge, and
- the segment from Channel 5-Bridge to Anne's Beach.



The following historic bridges are also scheduled for reconstruction to be used as part of the Overseas Heritage Trail:

- The old Park Channel Bridge at MM 18.7,
- The old South Pine Channel Bridge at MM 29,
- The Ohio-Missouri Historic Bridge at MM 39.1, and
- The old Long Key Bridge at MM 63.

Copies of the FDOT's most recent Five Year Work Program are available at the Florida Department of Transportation offices in Marathon.

Summary of Transportation Facilities Analysis

The Land Development Regulations provide clear guidance for assessing the capacity of the roadway system in Monroe County. U.S. 1 is required to maintain at least a level of service of 'C', while County roads must maintain a level of service of 'D'. Level of service is determined using the speed-based methodology developed by the U.S. 1 Level of Service Task Force in 1993. The speed based methodology utilizes the empirical relationship between volume-based capacities, and median vehicle speeds. The level of service for U.S. 1 is measured for the overall 108 miles of the roadway as well as for the 24 individual segments making up the roadway in the Keys.

The traffic volumes recorded at Big Pine, Marathon and Upper Matecumbe have increased as compared to the traffic volumes during the 2003 study. Using the historical traffic data, incorporating the 2003 data (based on a regression analysis), the three count locations on U.S. 1 have shown a traffic growth of 0.07%, 1.51%, and 2.37% per year respectively.

The overall travel speed on U.S. 1 for 2004 is .7 mph lower compared to the 2003 overall travel speed. The reserve speed for the entire length of U.S. 1 is .4 miles per hour. This means that the entire segment is operating with only **marginal capacity**.

Compared to 2003 data, the travel speeds on 10 of the 24 segments increased. These segments are:
Boca Chica (+0.2 mph) Torch (+0.4 mph)



Saddlebunch (+1.5 mph)	Duck (+1.4 mph)
Sugarloaf (+0.1 mph)	Long (+0.7 mph)
Cudjoe (+0.5 mph)	L. Matecumbe (+0.4 mph)
Summerland (+1.1 mph)	Big Coppitt (+0.1 mph)

Travel speeds in 14 segments have decreased. These segments are:

Stock Island (-3.8 mph)	Tea Table (-0.2 mph)
Ramrod (-0.3 mph)	U. Matecumbe (-0.5 mph)
Big Pine (-1.4 mph)	Windley (-0.4 mph)
Bahia Honda (-1.7 mph)	Plantation (-1.2 mph)
7-Mile Bridge (-1.2 mph)	Tavernier (-1.8 mph)
Marathon (-3.0 mph)	Largo (-2.8 mph)
Grassy (-0.8 mph)	Cross (-2.7 mph)

Compared to last year's (2003) study results, there are changes in LOS to eight of the segments. The Stock Island, Ramrod, and Bahia Honda segments experienced decreases in LOS from A to B. The Saddlebunch and Duck segments experienced increases in LOS from C to B. The 7-Mile Bridge and Plantation segments decreased from LOS B to LOS C. The Lower Matecumbe segment increased from LOS D to LOS C.

The largest speed increase of 1.5 mph was recorded in the Saddlebunch segment, while the largest speed decrease was 3.8 mph and was recorded at both Stock Island and Marathon.

In 2004 there were two segments which are considered "inadequate": Tea Table (Segment 18), and Cross Key (Segment 24) are below the LOS C threshold, consistent with the past two years of data. However, both segments have reserve capacities within the 5% allocation.

In 2004 there were ten segments which are "marginally adequate" in terms of reserve capacity: All County roads have levels of service above the required standard of 'D'.



POTABLE WATER

The Florida Keys Aqueduct Authority (FKAA) is the provider of potable water in the Florida Keys. The Biscayne Aquifer is the groundwater supply source for the FKAA. The wellfield is located in a pineland preserve west of Florida City in Miami-Dade County. The FKAA wellfield contains some of the highest quality groundwater in the State, meeting or exceeding all regulatory standards prior to treatment. Strong laws protect the wellfield from potentially contaminating adjacent land uses. Beyond the County's requirements, FKAA is committed to comply with and surpass all federal and state water quality standards and requirements.

The groundwater from the wellfield is treated at the J. Robert Dean Water Treatment Facility in Florida City, which currently has a maximum water treatment design capacity of 22 million gallons per day (MGD). The water treatment process consists primarily of lime softening, filtration, disinfection and fluoridation. The treated water is pumped to the Florida Keys through a 130 mile long pipeline at a maximum pressure of 250 pounds per square inch (psi). The pipeline varies in diameter from 36 inches in Key Largo to 18 inches in Key West. The FKAA distributes the treated water through 648 miles of distribution piping ranging in size from $\frac{3}{4}$ inch to 12 inches in diameter. In 2003, the FKAA replaced over 141,000 feet of various size distribution water mains. The FKAA's Water Distribution System Upgrade Plan calls for the upgrade or replacement of 59,960 feet of water main during fiscal year 2003-04.

The FKAA maintains storage tank facilities which provide an overall storage capacity of 45.2 million gallons system wide. The size of the tanks vary from 0.2 to 5.0 million gallons. These tanks are utilized during periods of peak water demand and serve as an emergency water supply. Since the existing transmission line serves the entire Florida Keys (including Key West), and storage capacity is an integral part of the system, the capacity of the entire system must be considered together, rather than in separate service districts.

Also, the two saltwater Reverse Osmosis (RO) plants, located on Stock Island and Marathon, are available to produce potable water under emergency conditions. The RO desalination plants are capable of producing their designed capacities of 1.8 and 0.9 million gallons per day (MGD) of water, respectively.



At present, Key West is the only area of the County served by a flow of potable water sufficient to fight fires. Outside of Key West, firefighters rely on a variety of water sources, including tankers, swimming pools, and salt water either from drafting sites on the open water or from specially constructed fire wells. Although sufficient flow to fight fires is not guaranteed in the County, new hydrants are being installed as water lines are replaced to make water available for fire fighting purposes and pump/tank stations are being upgraded to provide additional fire flow and pressure.

Demand for Potable Water

In October 2002, South Florida Water Management District approved the FKAA's increase in Water Use Permit (WUP). The WUP increases FKAA's potential withdraws to an average of 19.93 and a maximum of 23.79 Million Gallons per Day (MGD). In 2003, the FKAA distributed an average of 17.29 and a maximum of 22.2 MGD to the Florida Keys. As a condition of the WUP, the FKAA is constructing a Floridan Aquifer Storage and Recovery (ASR) system. This system is designed to recharge and store water from the Biscayne Aquifer during the wet season (May through November) in the Floridan Aquifer which is approximately 800-1,000 feet below the ground surface, and then recover fresh water to supplement the Biscayne Aquifer during the dry season (December through April). Unless the projected future water demands decrease, the FKAA must also consider an alternative source of water supply such as a brackish or salt water source which will require a new water treatment plant.

Demand for potable water is influenced by many factors, including the size of the permanent resident and seasonal populations, the demand for commercial water use, landscaping practices, conservation measures, and the weather. Figure 3.1 summarizes FKAA's historic withdrawals, in millions of gallons. The table also shows the percent change in withdrawal from one year to the next, the existing Water Use Permit (WUP) withdrawal limits, and the reserve capacity available for future development under the existing WUP.



Figure 3.1 - Annual Water Withdrawals 1980 to 2003				
Year	Annual Withdrawal (MG)	% Change	WUP Limit (MG)	WUP +/- Annual Allocation (MG)
1980	2,854.90	-	N/A	N/A
1981	3,101.10	8.60%	N/A	N/A
1982	3,497.30	12.80%	N/A	N/A
1983	3,390.20	-3.10%	N/A	N/A
1984	3,467.50	2.30%	4,450	982.5
1985	4,139.20	19.40%	4,450	310.8
1986	4,641.50	12.10%	5,110	468.5
1987	4,794.60	3.30%	5,110	315.4
1988	4,819.80	0.50%	5,110	290.2
1989	4,935.90	2.40%	5,110	174.1
1990	4,404.10	-10.80%	5,560	1,155.90
1991	4,286.00	-2.70%	5,560	1,274.00
1992	4,461.10	4.10%	5,560	1,098.90
1993	5,023.90	12.60%	5,560	536.1
1994	5,080.00	1.10%	5,560	480
1995	5,140.40	1.20%	5,778	637.6
1996	5,272.00	2.60%	5,778	506
1997	5,356.00	1.60%	5,778	422
1998	5,630.00	5.10%	5,778	148
1999	5,935.30	5.40%	5,778	-157.3
2000	6,228.00	10.60%	5,778	-450
2001	5,626.70	-9.70%	5,778	151.3
2002	6,191.16	10.03%	7,274	1083.29
2003	6,288.29	1.57%	7,274	985.84
Source: Florida Keys Aqueduct Authority, 2004				

Figure 3.2 shows the projected water demand for 2004. Figure 3.3 indicates the amount of water available on a per capita basis. Based on Functional Population and permitted water withdrawal, the average water available is above 100



gallons per capita (person). The 100 gallons per person per day standard is commonly accepted as appropriate, and is reflected in Policy 701.1.1 of the Year 2010 Comprehensive Plan.

Figure 3.2 - Projected Water Demand in 2004

	FKAA Permit Thresholds	2003 Pumpage	2004 Water Demand Projected
Average Daily Withdrawal	19.93	17.29	17.57
Maximum Daily Withdrawal	23.79	22.2	22
Annual Withdrawal	7,274	6,288	6,414
<i>All figures are in millions of gallons</i>			
Source: Florida Keys Aqueduct Authority, 2004			

Figure 3.3- Per Capita Water Availability

Year	Functional Population	Average Daily Withdrawal (gallons)	Average Water Available Per Capita (gallons)	Maximum Daily Withdrawal (gallons)	Maximum Water Available Per Capita (gallons)
1998	156,120	15,830,000	101.4	19,190,000	122.9
1999	157,172	15,830,000	100.7	19,190,000	122.1
2000	159,113	15,830,000	99.5	19,190,000	120.6
2001	159,840	15,830,000	99	19,190,000	120.1
2002	160,568	19,930,000	124.1	23,790,000	148.2
2003	161,227	19,930,000	123.6	23,790,000	147.6
2004	161,235	19,930,000	123.6	23,790,000	147.5
Source: Florida Keys Aqueduct Authority, 2004					

FKAA's current Water Use Permit (Permit # 13-00005W) from the South Florida Water Management District was obtained in 2002, and is good for a period of five years. The current WUP allows an average daily water withdrawal of 19.93 million gallons per day (MGD), a maximum daily withdrawal of 23.79 MGD, and a yearly maximum of 7.274.45 billion gallons.

Preliminary figures for 2004 indicate an increase in average day water use of 2 percent through May compared to 2003



figures. Therefore, the average daily water demand withdrawal projections for 2004 reflect this increase.

The 1999 Public Facility Capacity Assessment Report recommended the following actions to be considered by the Board of County Commissioners with respect to potable water:

- Continue to monitor water consumption and return to the Board for further direction; and
- Prepare and adopt a series of ordinances related to water conservation, including plumbing efficiency standards, a landscaping ordinance, and a permanent irrigation ordinance; and
- Enter into a memorandum of understanding with the FKAA to address the above items.

The Growth Management Division plans to work with the FKAA on water consumption and conservation. Revised plumbing efficiency standards have been implemented. Efforts on a permanent irrigation ordinance should be coordinated with Monroe County and other local governments. The Growth Management Division has offered to work with the FKAA on the development of an intergovernmental team to discuss water conservation options since conservation efforts must be undertaken by all jurisdictions in the Keys to be successful.

Improvements to Potable Water Facilities

FKAA has a long-range capital improvement plan for both the distribution system and the transmission and supply system, as shown in the table below. The total cost of the scheduled improvements is approximately \$67.5 million over the next 5 years. These projects are to be funded by the newly revised water rate structure, long-term bank loans, and grants.

The scheduled distribution system improvements include replacing and upgrading lines in various subdivisions throughout the Lower, Middle, and Upper Keys. These improvements began in 1989, when FKAA embarked on the Distribution System Upgrade Program to replace approximately 190 miles of galvanized lines.

In addition to improvements to the distribution system, FKAA also has significant improvements planned for the transmission and supply system. FKAA expects to expand the treatment capacity at the J. Robert Dean Water Treatment



Plant to meet future water demands. Also, the FCAA is planning improvements to the pump stations to improve flow/pressure and construction of water storage tanks to provide additional emergency water supply.

Figure 3.4 on the following pages shows the projected capital improvements to the potable water system planned by the FCAA.

Figure 3.4 - FCAA Projected 5 Year Capital Improvement Plan							
Proj. No.	Project	2004	2005	2006	2007	2008	Total
Water Treatment							
1077	Phase II - High Service Pump	100,000	1,574,000				1,674,000
1073	Aquifer Storage and Recovery (ASR)	750,000	628,000				1,378,000
1079	WTP Control System	126,000					126,000
	Security Cameras and Lighting		350,000				350,000
	Stock Island RO-Permeators & Carbonation	60,000	840,000				900,000
	Desalination Production Facility (Design Only)	75,000	250,000	250,000			575,000
Distribution System							
	Replace Distribution Pipe	3,500,000	3,500,000	3,000,000	3,000,000	3,000,000	16,000,000
	North Roosevelt Blvd (JPA w/FDOT)				425,000	425,000	850,000
2186	Key West Plant Pump Station	400,000	3,470,000	1,530,000			5,400,000
2183	Cudjoe Tank & Pump Station	850,000	615,000	615,000			2,080,000
2191	Vaca Cut Tank & Pump Station	416,000	341,000				757,000



2187	Islamorada Tanks/Distribution Imp.	50,000		750,000			800,000
2189	Big Pine Pump Station	550,000	270,000				820,000
	Key Largo Storage Tank & Dist. Pump Station			1,000,000	1,000,000		2,000,000
Transmission System							
	Water Tank Long Key Station				1,100,000		1,100,000
	Water Tank Ramrod Station			1,100,000			1,100,000
1075	Marathon Pump Station Imp. (Engine&Pumps)	100,000	900,000				1,000,000
1042	Jewfish Creek/Cross Key (DOT)	85,000	60,000	1,000,000	2,700,000	1,200,000	5,045,000
	North Roosevelt Blvd (JPA w/FDOT)				425,000	425,000	850,000
	Phase II-Cathodic Protection System		500,000	1,500,000			2,000,000
1064	Key Largo Trans Pump Sta. & Pipeline Inst.	3,500,000	2,000,000	50,000			5,550,000
	Whitehead/Southard Transmission Main		150,000				150,000
	Replace 500' 18" Trans. - Key Largo radio		100,000				100,000
	Replace 1,400' 18" Trans. - Key Largo swamp			300,000			300,000
	Replace 20,000' 36" Trans. Key Largo				1,500,000	2,000,000	3,500,000
Facilities and Structures							
3080	Rockland Key - Area 2 & Const. Crew Yard	600,000					600,000
3073	Desal Seawall & Dolphins	50,000	50,000	464,000			564,000
	Admin Bldg. Renov. (Security/Roof/AC/Fire)	150,000	150,000	500,000			800,000



	New Admin Bldg/Garage	100,000	500,000	4,000,000			4,600,000
3077	Marathon Central Warehouse	250,000	1,000,000	500,000			1,750,000
	DESAL Customer Service/Records Bldg	100,000	900,000				1,000,000
	Marathon Customer Service Center	600,000	300,000	1,250,000	1,250,000		3,400,000
	DESAL/Stock Island/Lower Keys Garage Wastewater		40,000	200,000			240,000
3083	Stock Island Pump Station Wastewater			120,000			120,000
TOTALS		12,412,000	18,488,000	18,129,000	11,400,000	7,050,000	67,479,000
Source: Florida Keys Aqueduct Authority, 2004							



EDUCATION FACILITIES

The Monroe County School Board oversees the operation of 13 public schools located throughout the Keys. Their data includes both unincorporated and incorporated Monroe County. The system consists of three high schools, one middle school, three middle/elementary schools, and six elementary schools. Each school offers athletic fields, computer labs, a cafetorium that serves as both a cafeteria and auditorium, and bus service. Approximately 54 busses transport about 4,316 students to and from school each day. In addition to these standard facilities, all high schools and some middle schools offer gymnasiums.

The school system is divided into three subdistricts that are similar, but not identical to the service areas outlined in Section 9.5-292 of the Land Development Regulations. One difference is that the School Board includes Fiesta Key and the islands that make up Islamorada in the Upper Keys (Subdistrict 1), while the Land Development Regulations place them in the Middle Keys (Subdistrict 2). Also, the School Board includes Key West in the Lower Keys (Subdistrict 3), while the Land Development Regulations do not consider Key West. The data presented in this section are based on the School Board's subdistricts.

Subdistrict 1 covers the Upper Keys from Key Largo to Lower Matecumbe Key and includes one high school and two elementary/middle schools, as shown in Figure 4.1. Subdistrict 2 covers the Middle Keys from Long Key to the Seven Mile Bridge and includes one high/middle school and one elementary school. Subdistrict 3 covers the Lower Keys, from Bahia Honda to Key West and includes one high school, one middle school, one elementary/middle school, and five elementary schools.



Figure 4.1 - Schools by Subdistrict		
Subdistrict 1	Subdistrict 2	Subdistrict 3
Coral Shores High School (9-12)	Marathon Middle/High School (7-12)	Key West High School (9-12)
Key Largo Elementary/Middle School (K-8)	Stanley Switlik Elementary (K-6)	Horace O'Bryant Middle School (6-8)
Plantation Key Elementary/Middle School (K-8)		Adams Elementary (K-5)
		Archer/Reynolds Elementary (K-5)
		Poinciana Elementary (K-5)
		Sigsbee Elementary (K-5)
		Big Pine Key Neighborhood School (Pre K-3)
		Sugarloaf Elementary/Middle School (K-8)
Source: Monroe County School Board, 2004		

Demand for School Facilities

The population of school age children in Monroe County is influenced by many factors, including the size of the resident and seasonal populations, national demographic trends (such as the "baby boom" generation), that result in decreasing household size, economic factors such as military employment, the price and availability of housing, and the movements of seasonal residents.

The School Board collects enrollment data periodically throughout the year. Counts taken in the winter are typically the highest, due to the presence of seasonal residents. The following table (Figure 4.2) shows the fall school enrollments from 1992 to 2003 by subdistrict as taken from the School Board's Fall Student Survey.



Figure 4.2 - Fall School Enrollments 1992-2003												
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Subdistrict 1												
Coral Shores (H)	605	597	649	702	672	701	757	758	800	810	801	811
Key Largo (E/M)	1,310	1,213	1,235	1,198	1,223	1,273	1,253	1,183	1,173	1,117	1,112	1,073
Plantation (E/M)	718	698	721	737	730	703	675	643	668	647	641	650
<i>Subtotal</i>	<i>2,633</i>	<i>2,508</i>	<i>2,605</i>	<i>2,637</i>	<i>2,625</i>	<i>2,677</i>	<i>2,685</i>	<i>2,584</i>	<i>2,641</i>	<i>2,574</i>	<i>2,554</i>	<i>2,534</i>
Subdistrict 2												
Marathon (H)	545	523	578	642	637	612	637	660	679	682	693	654
Switlik (E)	734	775	776	769	782	815	834	791	671	687	714	676
<i>Subtotal</i>	<i>1,279</i>	<i>1,298</i>	<i>1,354</i>	<i>1,411</i>	<i>1,419</i>	<i>1,427</i>	<i>1,471</i>	<i>1,451</i>	<i>1,350</i>	<i>1,369</i>	<i>1,407</i>	<i>1,330</i>
Subdistrict 3												
Key West (H)	1,114	1,120	1,155	1,255	1,237	1,327	1,372	1,344	1,305	1,327	1,301	1,382
O'Bryant (M)	852	902	876	909	897	863	899	814	838	854	874	873
Sugarloaf (E/M)	899	810	1,039	1,013	987	960	937	913	941	854	901	904
Adams (E)	541	529	516	486	500	499	574	566	513	544	598	591
Archer (E)	480	441	462	454	454	520	493	460	393	376	386	382
Poinciana (E)	521	566	613	626	637	608	620	632	599	586	583	547
Sigsbee (E)	471	400	431	431	398	404	423	393	358	363	326	295
Sands	81	81	85	52	52	58	1	0	0	0	0	0
<i>Subtotal</i>	<i>4,959</i>	<i>4,849</i>	<i>5,177</i>	<i>5,226</i>	<i>5,162</i>	<i>5,239</i>	<i>5,319</i>	<i>5,122</i>	<i>4,947</i>	<i>4,904</i>	<i>4,969</i>	<i>4,974</i>
Total	8,871	8,655	9,136	9,274	9,206	9,343	9,475	9,157	8,938	8,847	8,930	8,838
Source: Monroe County School Board, 2004												

Level of Service of School Facilities

The Monroe County Land Development Regulations do not identify a numeric level of service standard for schools (such as 10 square feet of classroom space per student). Instead, Section 9.5-292 of the regulations requires classroom capacity "adequate" to accommodate the school-age children generated by proposed land development.

The School Board uses recommended capacities provided by the Florida Department of Education (FDOE) to determine



each school's capacity. All schools have adequate reserve capacity to accommodate the impacts of the additional land development activities projected for 2004-2005 school year. Figure 4.3 shows each school's capacity and the projected number of students.

Figure 4.3 -School Capacity, & Projected Number of Students					
	Recommend- ed Capacity	Projected 2001-2002	Projected 2002-2003	Projected 2003-2004	Projected 2004-2005
Subdistrict 1					
Coral Shores	868	831	818	747	835
Key Largo	1,240	1,191	1,115	1,082	1,031
Plantation	971	645	653	665	649
<i>Subtotal</i>	<i>3,079</i>	<i>2,667</i>	<i>2,586</i>	<i>2,494</i>	<i>2,515</i>
Subdistrict 2					
Marathon	1,018	667	673	724	665
Switlik	925	668	674	684	651
<i>Subtotal</i>	<i>1,943</i>	<i>1,335</i>	<i>1,347</i>	<i>1,408</i>	<i>1,316</i>
Subdistrict 3					
Key West	1,349	1,312	1,267	1,313	1,408
O'Bryant	833	818	838	876	887
Sugarloaf	1,356	941	842	835	888
Adams	547	506	546	605	552
Archer	470	398	371	357	350
Poinciana	660	585	574	591	550
Sigsbee	534	357	373	327	284
Sands	0	0	0	0	0
<i>Subtotal</i>	<i>5,749</i>	<i>4,917</i>	<i>4,811</i>	<i>4,904</i>	<i>4,919</i>
Total	10,771	8,919	8,744	8,806	8,750
Source: Monroe County School Board, 2004					



Enrollment figures for the 2003-2004 school year and projected enrollment figures for the 2004-2005 school year, show that O'Bryant Middle School, and Adams Elementary School exceed their recommended capacity and that Key West School is projected to exceed its recommended capacity for the 2004-2005 school year. However, school facility plans are based on enrollment projections 5 years out (2008-2009 school year), at which time sufficient capacity will be available. The remaining schools have more than sufficient capacity to accommodate all fall enrollments in 2004 and future years.

Improvements to School Facilities

Florida Statute 163.3177 requires counties to identify lands and zoning districts needed to accommodate future school expansions. In order to bring the Monroe County Year 2010 Comprehensive Plan into compliance with this statute, in 1998 the Monroe County Planning Department and School Board conducted research to determine the existing school capacity and the potential need for future educational facilities in Monroe County.

This study focused on land requirements for each of the schools expansion needs. Overall, the County has sufficient vacant and appropriately zoned land to meet the area's current and future school siting needs. The specific land requirements for the public schools in the County are discussed below.

Key Largo Elementary/Middle School (K-8)

Meeting the substantial land requirements of Key Largo School is a top priority of the School Board. The Department of Education (DOE) has instructed the Monroe County School Board to construct an additional 43,100 square feet of school space. However, current land use regulations prohibit the School Board from construction of any additional facilities on or adjacent to its current site due to the environmental sensitivity of the area. The School Board recently made an unsuccessful attempt to purchase a new site on which to build the required school facilities. Unless the Board is able to provide these facilities in Key Largo they will be non-compliant with the minimum DOE standards. Fully utilizing the current Key Largo site would enable the School Board to meet their DOE requirements and to minimize other secondary environmental impacts associated with the construction of a new school. It has been determined that the School Board may clear the required amount of land, but the location of the clearing is still under review by the Planning and Environmental Resources Department.



Plantation Key Elementary/Middle School (K-8)

The DOE has instructed the Monroe County School Board to construct an additional 16,600 square feet of school space for this school. The parcel of land for this school is not large enough to accommodate this development and regulations prohibit the School Board from constructing any additional facilities on, or adjacent to, its current site due to the environmentally sensitive nature of the area. The new Village of Islamorada will address plans for Plantation Key School and other educational facilities in its comprehensive plan.

Stanley Switlik Elementary

Expanding the existing school facilities into the two parcels of land flanking the current site will accommodate the land requirements for Stanley Switlik Elementary. The school has a new cafeteria/kitchen/multipurpose building as well as new parking and ballfields. Construction on the new facilities has been completed.

Marathon High and Middle School

The land requirements for Marathon High and Middle School are currently being met. The DOE has instructed the Monroe County School Board to construct a new 13,000 square foot auditorium for this school that could also serve as a community center.

Coral Shores High School

The School Board is currently finishing construction on the replacement school, which is scheduled for completion by the end of 2003.

Figure 4.4, on the following page, is a table showing the results of the investigation completed by the Monroe County School Board and Planning Department in 1998 and updated in 2004.



Figure 4.4 - Preliminary Public School Land Needs				
Schools	Developed Site (acres and zoning)	Land Needed		Potential Sites (acres and zoning)
		1998	2004 (estimate)	
Key Largo Elementary/Middle School (K-8)	27 acres (SC & SR)	2 acres (1)	0 acres	There are approximately 70 acres of vacant land zoned SR and 65 acres zoned NA surrounding the current site.
Plantation Key Elementary/Middle School (K-8)	8.29 acres (SR)	N/A (2)	N/A	N/A
Coral Shores High School	20.13 acres (SR)	N/A (2)	N/A	N/A
Stanley Switlik Elementary	9.43 acres (SC)	N/A	0 acres	N/A
Marathon High and Middle Schools	27 acres (SR)	0 acres (3)	0 acres	There are approximately 21 acres of vacant land zoned NA surrounding the current site.
Big Pine Neighborhood Elementary	4.5 acres (SC)	0 acres	0 acres	There are approximately 4.27 acres of vacant land zoned SC and 8.6 acres of vacant land zoned IS surrounding the current site.
Sugarloaf Middle and Elementary	42 acres (SC & NA)	0 acres	0 acres	There are approximately 27 acres of vacant land zoned NA and 34 acres zoned SR surrounding the current site.
(1) The School Board is working with Monroe County Planning Department to meet this need prior to the end of 2004.				
(2) Islamorada will address plans for Plantation Key School, Coral Shores High School and other educational facilities in their comprehensive plan.				
(3) The Marathon High School and Middle School Boards want to partner with the County to create an auditorium that will also serves as a community center.				
Source: Monroe County School Board, 2004				



SOLID WASTE FACILITIES

Monroe County's solid waste facilities are managed by the Solid Waste Management Department, which oversees a comprehensive system of collection, recycling, and disposal of solid waste. Prior to 1990, the County's disposal methods consisted of incineration and landfilling at sites on Key Largo, Long Key, and Cudjoe Key. Combustible materials were burned either in an incinerator or in an air curtain destructor. The resulting ash was used as cover on the landfills. Non-combustible materials were deposited directly in the landfills.

In August 1990, the County entered into a contract with Waste Management, Inc. (WMI) to transport the solid waste to the contractor's private landfill in Broward County. In accordance with County-approved franchise agreements, private contractors perform collection of solid waste. Residential collection takes place four times a week (2 garbage/trash, 1 recycling, 1 yard waste); nonresidential collection varies by contract. The four (4) contractors currently serving the Keys are identified in Figure 5.1.

Figure 5.1 - Solid Waste Contractors		
Upper Keys	Middle Keys	Lower Keys
Keys Sanitary Service & Ocean Reef Club, Inc.	Mid-Keys Waste, Inc.	Waste Management of Florida, Inc.
Source: Monroe County Solid Waste Management Department, 2004		

The County's incinerators and landfills are no longer in operation. The landfill sites are now used as transfer stations for wet garbage, yard waste, and construction debris collected throughout the Keys by the four curbside contractors and prepared by WMI for shipment out of the Keys. However, it is important to note that a second, unused site on Cudjoe Key could be opened if necessary. Figure 5.2 on the next page summarizes the status of the County's landfills and incinerators.



Figure 5.2 - Solid Waste Facilities			
Site	Incinerators	Landfills	Reserve Capacity (cubic yards)
Key Largo	Closed 12/31/90	No Longer Active	0
Long Key	Closed 1/7/91	No Longer Active	0
Cudjoe			
Old Site	Closed 2/25/91	No Longer Active	0
Unused Site	None	Currently Inactive	180,000
Source: Monroe County Solid Waste Management Department, 2004			

The County's recycling efforts began in October 1994, when curbside collection of recyclable materials was made available to all County residences and businesses. Recycling transfer centers have been established in the Lower, Middle, and Upper Keys. Waste Management, Inc. continues to process yard waste into mulch. The mulch product is then made available to the public. In addition to County efforts, other government agencies are mulching and reusing yard waste, and private enterprises are collecting aluminum and other recyclable materials.

White goods, waste oil, batteries and tires are handled separately, with collection sites operating at each landfill/transfer station site. The County collects household hazardous waste at the Long Key and Cudjoe Key Transfer Stations, in addition to the Key Largo Recycling Yard. Hazardous waste from conditionally exempt small quantity generators is collected once a year, as part of an Amnesty Days program.

Demand for Solid Waste Facilities

For solid waste accounting purposes, the County is divided into three districts which are similar, but not identical to the service areas outlined in Section 9.5-292 of the Land Development Regulations (LDRs). One difference is that Windley Key, which is considered to be in the Upper Keys district in the LDRs, is included in the Middle Keys district for purposes of solid waste management. Another difference from the LDRs is that the cities of Layton and Key Colony Beach are included in the Middle Keys district for solid waste management.

Although Islamorada incorporated on December 31, 1997, the municipality continued to participate with Monroe County in the contract with Waste Management Inc. until September 30, 1998. Data for Monroe County solid waste generation is



calculated by fiscal year which runs from October 1 to September 30. Therefore, the effects of Islamorada's incorporation on solid waste services appear in the 1999 data. Data for the City of Key West and the Village of Islamorada is not included in this report.

Marathon's incorporation was effective on October 1, 2000 and they continue to participate in the Waste Management Inc. contract. Effects of the incorporation, if any, will appear in the 2001 data.

Demand for solid waste facilities is influenced by many factors, including the size and income levels of resident and seasonal populations, the extent of recycling efforts, household consumptive practices, landscaping practices, land development activities, and natural events such as hurricanes and tropical storms. Analyses provided by a private research group indicates that the average single-family house generates 2.15 tons of solid waste per year. Mobile homes and multifamily units, having smaller yards and household sizes, typically generate less solid waste (1.96 and 1.28 tons per year, respectively).

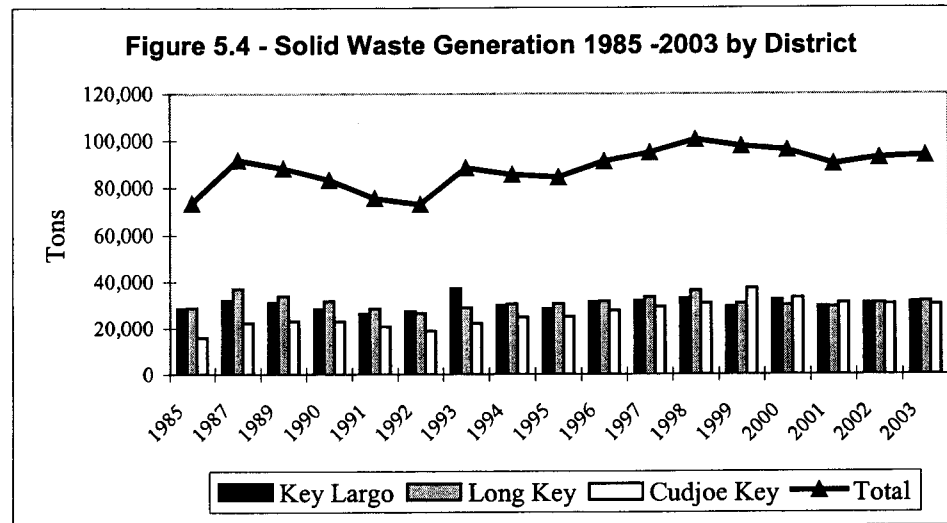
The table and graph on the following page summarize the solid waste generated by each district. The totals for each district are a combination of four categories of solid waste: garbage, yard waste, bulk yard waste and other (includes construction and demolition debris).

After reaching a peak in 1988, the data shows a general decline in the total amount of solid waste generated throughout the County. However, in 1993 there was an increase of 21 percent in the amount of solid waste generated. This increase is attributed to the demolition and rebuilding associated with Hurricane Andrew, which made landfall in South Florida in late August 1992. For the next two years the amount of solid waste generated in the County was once again on the decline. However, from 1996 onward the amount of solid waste generated has been on the increase until 1998, when it reached its highest level yet. This increase is attributed to the debris associated with Hurricane Georges, which made landfall in the Keys in September of 1998. A portion of the decline seen from 1998 to 1999 may be attributable to the reduction in solid waste collected from Islamorada. The continuing decline shown in 2000 and 2001 is due to a reduction in construction and demolition debris being brought to the County transfer stations following the implementation of the Specialty Hauler ordinances. The increase in 2002 and 2003 may be attributable to fluctuations in waste streams from Islamorada.



Figure 5.3 - Solid Waste Generation by District					
Year	Key Largo	Long Key	Cudjoe Key	Total	% Change
1985	28,585	28,890	15,938	73,413	NA
1987	32,193	37,094	22,206	91,493	24.63%
1989	31,173	33,931	23,033	88,137	-3.67%
1990	28,430	31,924	22,988	83,342	-5.44%
1991	26,356	28,549	20,699	75,604	-9.28%
1992	27,544	26,727	18,872	73,143	-3.26%
1993	37,211	28,986	22,198	88,395	20.85%
1994	30,110	30,662	24,831	85,603	-3.16%
1995	28,604	30,775	25,113	84,492	-1.30%
1996	31,573	31,845	27,823	91,241	7.99%
1997	32,003	33,625	29,350	94,978	4.10%
1998	33,119	36,440	30,920	100,479	5.79%
1999	29,382	30,938	37,431	97,751	-2.71%
2000	32,635	30,079	33,420	96,134	-1.65%
2001	29,663	29,367	31,166	90,196	-6.18%
2002	31,018	31,217	30,700	92,935	3.04%
2003	31,529	31,889	30,385	93,803	0.93%
Note: The figures from 1984 to 1991 include white goods, tires, construction debris, and yard waste. They do not include source-separated recyclables.					
Source: Monroe County Solid Waste Management Department, 2004					





Level of Service of Solid Waste Facilities

Section 9.5-292 of the Land Development Regulations requires that the County maintain sufficient capacity to accommodate all existing and approved development for at least three (3) years. The regulations specifically recognize the concept of using disposal sites outside Monroe County.

As of June 2004, Waste Management Inc., reports a reserve capacity of approximately 30.5 million cubic yards at their Central Sanitary Landfill in Broward County, a volume sufficient to serve their clients for another 14 years. Figure 5.5 below shows the remaining capacity at the Central Sanitary Landfill.



Figure 5.5 - Remaining Capacity, Central Sanitary Landfill					
	2000	2001	2002	2003	2004
Remaining Capacity (volume in millions of cubic yards)	28 yd ³	27 yd ³	34.2 yd ³	32.3 yd ³	30.5 yd ³
Remaining Capacity (time)	14 years	13 years	14 years	14 years	14 years
Source: Monroe County Solid Waste Management Department, 2004					

Monroe County has a contract with WMI authorizing use of in-state facilities through September 30, 2016, thereby providing the County with approximately twelve years of guaranteed capacity. Ongoing modifications at the Central Sanitary Landfill are creating additional air space and years of life. In addition to this contract, the 180,000 cubic yard reserve at the County landfill on Cudjoe Key would be sufficient to handle the County's waste stream for an additional four to five years (at current tonnage levels), should the County choose to discontinue haul-out as the means of disposal.

The combination of the existing haul-out contract and the space available at the Cudjoe Key landfill provides the County with sufficient capacity to accommodate all existing and approved development for up to nineteen years.



PARKS AND RECREATIONAL FACILITIES

An annual assessment of parks and recreational facilities is not mandated by Section 9.5-292 of the Monroe County Land Development Regulations, however, it is required for concurrency management systems by the Florida Statutes. Level of Service standards for parks and recreational facilities are not mentioned in the Land Development Regulations, but are listed in Policy 1201.1.1 of the Monroe County Year 2010 Comprehensive Plan.

Parks and Recreational Facilities Level of Service Standard

The level of service (LOS) standard for neighborhood and community parks in unincorporated Monroe County is 1.64 acres per 1,000 functional population. To ensure a balance between the provisions of resource- and activity-based recreation areas the LOS standard has been divided equally between these two types of recreation areas. Therefore, the LOS standards are:

- 0.82 acres of *resource-based* recreation area per 1,000 functional population
- 0.82 acres of *activity-based* recreation area per 1,000 functional population

The LOS standards for each type of recreation area can be applied to unincorporated Monroe County as a whole or to each sub-area (Upper, Middle, and Lower Keys) of unincorporated Monroe County. In determining how to apply the LOS standard for each type of recreation area, the most important aspect to consider is the difference between resource- and activity-based recreation areas. Resource-based recreation areas are established around existing natural or cultural resources of significance, such as beach areas or historic sites. Activity-based recreation areas can be established anywhere there is sufficient space for ball fields, tennis or basketball courts, or other athletic events.

Since the location of resource-based recreation areas depends upon the natural features or cultural resources of the area and cannot always be provided near the largest population centers, it is reasonable to apply the LOS standard for resource-based areas to all of unincorporated Monroe County. Since activity-based recreation areas do not rely on natural features or cultural resources for their location and because they can be provided in areas with concentrated populations, it is more appropriate to apply the LOS standard to each subarea of the Keys.



It is important to note that the subareas used for park and recreational facilities differ from those subareas used in the population projections. For the purpose of park and recreational facilities, the Upper Keys are considered to be the area north of Tavernier. The Middle Keys are considered to be the area between Pigeon Key and Long Key. The Lower Keys are the area south of the Seven Mile Bridge.

An inventory of Monroe County's parks and recreational facilities is presented below. The facilities are grouped by subarea and are classified according to the principal use (resource or activity).

Figure 6.1 - Parks and Recreation Facilities Serving Unincorporated Monroe County			
Site Name	Facilities	Classification and Size (acres)	
		Resource	Activity
<i>Upper Keys Subarea</i>			
Garden Cove	Undeveloped.	1.5	
Hibiscus Park	Undeveloped.		0.46
Friendship Park	Basketball courts (2), playground, ball field, picnic shelters, parking and public restrooms.		1.92
Key Largo Community Park	A soccer field, two (2) ball fields, six (6) tennis courts, a jogging trail, three (3) basketball courts, roller hockey, volleyball, playground, picnic shelters, public restrooms, parking and aquatic center.		14
Sunset Point	Waterfront park with a boat ramp.	1.2	
Harry Harris	Two (2) ball fields, playground, restrooms, picnic shelters, beach, parking (89) and boat ramp.		16.4
Settler's Park	Playground, park benches, trails, and a historic platform.	3	
Sunny Haven	Undeveloped.	0.09	
Old S.R. 4-A	Undeveloped. NOT IN MASTER PLAN	0.3	
Key Largo Elementary	Monroe County School District; Playground, baseball field, running track, indoor gym.		3.4



Coral Shores High School	Monroe County School District; Baseball field, football field, softball field, 5 tennis courts, indoor gym.	10.1	
Plantation Key Elementary	Monroe County School District; playground, 1 tennis court, 1 basketball court, 1 baseball field.	1.7	
Subarea Total		6.09	47.98
Middle Keys Subarea			
Pigeon Key	Historic structures, research/educational facilities, and a railroad museum.	5	
Marathon High School	Monroe County School District; Baseball and football field, softball field, 3 tennis courts, 3 basketball courts, indoor gym.	7.8	
Switlik Elementary	Monroe County School District; Playground, 2 baseball fields, shared soccer/football field.	2.5	
Subarea Total		5	10.3
Lower Keys Subarea			
Little Duck Key	Picnic shelters, restrooms, boat ramp, and beach area.	25.5	
Missouri Key	Undeveloped.	3.5	
West Summerland	Boat Ramp.	31.8	
Heron Avenue	Undeveloped.	0.69	
Palm Villa	Playground and benches.		0.57
Big Pine Leisure Club	Undeveloped.		1.75
Blue Heron Park	Playground, basketball court, youth center, and picnic shelters.		5.5
Watson Field	Two (2) tennis courts, ball field, playground, and volleyball.		2.4
Ramrod Key Swim Hole	Swimming area with no facilities.	0.5	
Summerland Estates	Undeveloped.	0.13	
Little Torch Boat Ramp	Boat ramp.	0.1	
Sugarloaf Elementary	Monroe County School District; 1 baseball field, playground.		3.1
Baypoint Park	Playground, volleyball, bocchi ball, two (2) tennis courts, and picnic area.		1.58
Palm Drive cul-de sac	Undeveloped.	0.1	
Rockland Hammock	Undeveloped.	2.5	



Boca Chica Beach	Beach area.	6	
Delmar Avenue	Boat ramp.	0.2	
Big Coppitt Fire Department Playground	Playground and benches.		0.75
Wilhelmina Harvey Children's Park	Two playground areas, a walking trail and green space.		0.65
Bernstein Park	Ball field, soccer, basketball court, track, tennis courts, playground, restrooms and volleyball.		11
East Martello	Historic structures, teen center, and picnic area.	14.58	
West Martello	Historic structure.	0.8	
Higgs Beach/Astro City	Five (5) tennis courts, playground, volleyball, picnic shelters, beach area, pier, and public restrooms.		15.5
Lighthouse Museum	Historic structure and museum.	0.77	
Subarea Total		87.17	42.8
UNINCORPORATED MONROE COUNTY TOTAL		98.26	101.08
Source: Monroe County Planning Department, 2004			

There are currently 98.26 acres of resource-based recreation areas either owned or leased by Monroe County shown in Figure 6.1. Using the functional population projection for 2004 of 75,801 persons in unincorporated Monroe County, and the LOS standard of 0.82 acres per 1,000 functional population, the demand for resource based recreation areas is approximately 62.16 acres. The county currently has a resource-based land to meet the level of service with an extra 36.10 acres of reserve capacity.

Level of Service Analysis for Activity-Based Recreation Areas

The Year 2010 Comprehensive Plan allows activity-based recreational land found at educational facilities to be counted towards the park and recreational concurrency. There is currently a total of 101.08 acres of developed activity-based recreation areas either owned or leased by Monroe County and the Monroe County School Board. This total represents 47.98 acres in the Upper Keys (including Plantation Key in Islamorada), 10.3 acres in the Middle Keys (including Marathon), and 42.8 acres in the Lower Keys. Based on a LOS standard of 0.82 acres of activity-based recreation areas per 1,000 functional population in unincorporated Monroe County (37,314-Upper, 4,140-middle, and 34,347-Lower), the



demand for these recreation areas are 30.60, 3.39 and 28.16 acres for the Upper, Middle, and Lower Keys, respectively.

There is currently a reserve of 17.38, 6.9, and 14.64 (Upper, Middle, and Lower) for a total of 38.92 acres of activity-based recreation areas for all of unincorporated Monroe County. Figure 6.2 shows the level of service analysis for activity-based recreation areas in each subarea.

Figure 6.2 - Level of Service Analysis for Activity-Based Recreation Areas				
Subarea	2004 Functional Population	Total Activity-based Acreage Available	Demand (32 AC/1,000 people)	Reserve Capacity (in acres)
Upper Keys Total	37,314	47.98	30.60	17.38
Middle Keys Total	4,140	10.3	3.39	6.91
Lower Keys Total	34,347	42.8	28.16	14.64
Total	75,801	101.08	62.16	38.92

Source: Monroe County Planning Department, 2004

Future Parks and Recreation Planning

Monroe County is currently undertaking a comprehensive analysis of its parks and recreation system in order to more accurately plan for the recreational needs of the population. A parks and recreation master plan is being prepared and is anticipated to be complete within a year of this report. The master plan will assess the current level of service standard and how it is applied throughout the county, evaluate the current park system, recommend areas where new park sites should be acquired, and funding mechanisms which may be used for that acquisition. The master plan is mandated by the Year 2010 Comprehensive Plan and will allow the county to address the residents' parks and recreation needs more accurately.

Identifying parks and recreation needs is also a part of the on going Livable CommuniKeys Program. This community based planning initiative looks at all aspects of an area and, among other planning concerns, identifies the parks and recreation desires of the local population. The Livable CommuniKeys Program has been completed on Big Pine Key and No Name Key, and Tavernier. The process has recently begun in Key Largo and will begin shortly in Stock Island.



Acquisition of Additional Recreation Areas

The Monroe County Year 2010 Comprehensive Plan states in Objective 1201.2 that “Monroe County shall secure additional acreage for use and/or development of resource-based and activity-based neighborhood and community parks consistent with the adopted level of service standards.” The elimination of deficiencies in LOS standards for recreation areas can be accomplished in a number of ways. Policy 1201.2.1 of the Comprehensive Plan provides six (6) mechanisms that are acceptable for solving deficits in park level of service standards, as well as for providing adequate land to satisfy the demand for parks and recreation facilities that result from additional residential development. The six (6) mechanisms are:

1. Development of park and recreational facilities on land that is already owned by the county but that is not being used for park and recreation purposes;
2. Acquisition of new park sites;
3. Interlocal agreements with the Monroe County School Board that would allow for the use of existing school-park facilities by county residents;
4. Interlocal agreements with incorporated cities within Monroe County that would allow for the use of existing city-owned park facilities by county residents;
5. Intergovernmental agreements with agencies of state and federal governments that would allow for the use of existing publicly-owned lands or facilities by county residents; and
6. Long-term lease arrangements or joint use agreements with private entities that would allow for the use of private park facilities by county residents.

To date, the county has employed two of these six mechanisms – acquisition of new park sites (number 2 above) and interlocal agreements with the School Board (number 3 above). However, these agreements need to be examined more closely to determine the amount of available acreage for calculating concurrency. Furthermore, Monroe County cannot rely upon joint use facilities to eliminate existing deficiencies or meet future LOS requirements until interlocal, intergovernmental, or private use joint agreements are executed. For instance, the County is currently reviewing and revising the interlocal agreements with the Monroe County School Board to provide greater day time accessibility for students to public recreational facilities. Once executed, these agreements will ensure that the facilities will be available for general use to Monroe County residents to meet peak season, weekend, or time of day recreation demands.



Summary

Three of the five facility types addressed in this section-solid waste and schools-have sufficient capacity to serve the growth anticipated in 2004 at the adopted level of service. The remaining facility types, potable water and roads, demonstrate marginally adequate capacity or fail to meet the County's LOS standard in certain isolated situations.

Solid Waste. The combination of the existing haul-out contract and the space available at the Cudjoe Key Landfill provides the County with sufficient capacity to accommodate all existing and approved development for up to twenty years.

Schools. A 1998 study by the Monroe County Planning Department, in concert with the School Board, has determined that there is more than sufficient capacity in the schools to accommodate all fall enrollments in 2004 and future years.

Parks and Recreational Facilities. Using the functional population projection for 2004 of 75,801 persons in unincorporated Monroe County, and the LOS standard of 0.82 acres per 1,000 functional population, the demand for resource based recreation areas is approximately 62.16 acres. The county currently has adequate resource-based park facilities to meet the level of service with an extra 36.10 acres of reserve capacity.

For activity-based facilities, there is currently a reserve of 17.38, 6.9, and 14.64 (Upper, Middle, and Lower) for a total of 38.92 acres of activity-based recreation areas for all of unincorporated Monroe County.

Potable Water. Preliminary figures for 2004 indicate an increase in water use of 2% through May compared to 2003 figures. In October 2002, South Florida Water Management District (SFWMD) approved the Florida Keys Aqueduct Authority (FKAA) Water Use Permit (WUP) modification. The WUP allowed the FKAA to withdraw an average of 19.93 and a maximum of 23.79 million gallons per day. This new water rate is designed to encourage water conservation and is expected to decrease water use. An analysis of data shows that the residential and overall LOS standards for water consumption, as set out in Objective 701.1 of the Monroe County Year 2010 Comprehensive Plan, are being met.

Roads. The adopted level of standard for US-1 is LOS C. Based on the findings of the 2004 US-1 Arterial Travel Time



and Delay Study for Monroe County, the overall 2004 level of service for US-1 is LOS C. Staff will continue to monitor Los for various segments and work with FDOT on road improvements that may improve LOS on US-1.



**MONROE COUNTY
EVALUATION AND APPRAISAL REPORT
ISSUE: AFFORDABLE HOUSING**

Background

A serious problem facing the Florida Keys is the availability and dwindling inventory of affordable housing. The basic fact is that the cost to provide housing in the Florida Keys is the highest in Florida due to land and construction costs. Through the span of the current Comprehensive Plan, this problem has been highlighted by a series of events such as Hurricane Georges, this event led to a support for the establishment of an Affordable Housing Task Force by Senator Daryl Jones and Representative Ken Sorenson.

One of the goals of the 2010 Comprehensive Plan is to set aside 20% of the total number of available permits within the Permit Allocation System (ROGO) for affordable housing. The 1999 review of ROGO allocation determined that only 8% of the county's available permits have been utilized for affordable housing purposes.

Furthermore, a majority of these affordable housing allocations were not meeting the needs of the low to moderate-income households. In response to these problems and the chronic shortage of affordable housing in the Keys, the Planning Department initiated an investigation of regulatory disincentives to the development of affordable housing.

Starting in 1999, the Planning Department initiated a number of amendments designed to improve the environment for affordable housing. A 1999 Comprehensive Plan amendment changed Policy 101.2.4 to ensure that unused affordable housing ROGO allocations would be rolled over from year to year and remain in the affordable housing pool. The previous policy allowed for the transfer of these unused allocations to the market rate pool.

A second part of the amendment to Policy 101.2.3 is the prohibition of affordable housing developments in environmentally sensitive lands. Due to a lack of competition for the affordable housing allocations, properties within environmentally sensitive areas were able to receive permit allocations. In a more competitive setting such as the market rate allocations, developments in environmentally sensitive areas would usually be outscored by developments in more appropriate locations or would be mitigated through points received through a land dedication option.

Other incentives for affordable housing include Land Development Regulation changes to allow the transfer of development rights from existing dwelling units from one location to another if the new unit is to be an affordable housing unit. These units would only be available when certain standards or criteria for both the sending and receiving sites are met.



Finally, the ROGO evaluation criteria were amended to add points for affordable housing projects. These points would be applied to units that are part of a multifamily development. Additional points are also given if the development uses TREs.

On May 2001, the DCA and Monroe County entered into a Memorandum of Understanding to restore 201 ROGO allocations to the County for Affordable Housing. These allocations were held back by the DCA due to a lack of progress in implementing Policy 101.2.13 (The Comprehensive Plan Work Program). These restored credits are intended to address the critical affordable housing problem in the Keys.

The County assigned these 201 ROGO allocations as follows: 52 allocations for the Tradewinds multi-family project in Key Largo; 9 allocations for the Meridian West multi-family project in Stock Island and 138 allocations to the City of Marathon for affordable single-family housing.

To further assist the County in meeting its affordable housing needs, the County requests that the Florida Administrative Commission consider restoring 117 allocations for exclusive use to provide new affordable housing.

Table 1.1 Summary of Affordable Housing Activity in Unincorporated Monroe County

Completed Units

Name of Project	# of Units
Tradewinds	118
Housing Authority	21
Dolphin Cove	9
Hawk's Cay	14
Habitat for Humanity	4
Inn Resorts	1
Various locations/Mobile Homes	15
Total	182

Units Not Constructed

Name of Project	# of Units
Meridian West	102
Housing Authority	29
Hawk's Cay	4
Various locations/Mobile Homes	3
Total	138



Evaluation and Analysis of Comprehensive Plan Objectives and Policies

Objectives, Policies Summary	Current Conditions/Amendments to Policy since original adoption	Is Objective or Policy accomplished or being implemented ?	Need for Future Comprehensive Plan Amendments.
Policy 101.2.4 Allocate at least 20 percent of residential growth to affordable housing units as part of the Permit Allocation System.	Policy was amended in 1999 to allow rollover of unused affordable housing allocations in the ROGO system from year to year instead of rolling over into the market rate pool. Furthermore, the County Commission has the authority to increase the allocation of affordable housing by taking allocation units from market rate allocations.	Yes.	No amendments necessary.
Policy 101.2.14 Notwithstanding any other provision of the comprehensive plan, ROGO allocations and nutrient reduction credits utilized for affordable housing projects may be pooled and transferred between ROGO sub-districts and between local government jurisdictions within the Florida Keys ACSC. Any such transfer between local government jurisdictions within the Florida Keys ACSC must be accomplished through interlocal agreement.	No change or amendments.	Yes.	No amendments necessary.
Policy 101.5.9 Allow for permitting of multi-family units within the residential permit allocation system. If project includes more units than are available, the entire project may receive allocation awards, if excess allocation is reduced from next allocation period. Multi-family affordable housing or elderly housing projects shall be given priority.	Current ROGO LDRs permits the use of future ROGO allocations for multi-family unit projects. As an amendment to encourage development of mixed income projects, it is proposed that the 20% market rate housing permitted in employee housing projects will qualify for +3 points in ROGO.	Yes.	No amendments necessary.



Objective 105.2 Implement 20-year Land Acquisition Program for purposes to include: ... 3) secure and retain lands suitable for affordable housing.	Objective 105.2 is a part of Goal 105, which provides a framework for future development and land acquisition for the next 20 years. Currently, the Monroe County Land Authority donates property for affordable housing. To improve in implementing this objective the County will complete the LAMP. This plan will contain a strategy for funding land acquisition for conservation, recreation, retirement of development rights, and sites for affordable and employee housing.	Yes.	No amendments necessary.
Policy 105.2.3 Priority for land acquisition shall be as follows: Tier I, Tier II, Tier III, except acquisition of land for affordable housing shall be first priority.	Objective 105.2.3 is a part of Goal 105, which provides a framework for future development and land acquisition for the next 20 years. Currently, the Monroe County Land Authority donates property for affordable housing. To further implement this policy the County will complete the LAMP. This plan will contain a strategy for funding land acquisition for conservation, recreation, retirement of development rights, and sites for affordable and employee housing.	Yes.	No amendments necessary.
Policy 105.2.7 Within a Tier III (infill area). Implement limited land acquisition program to acquire scarified properties for affordable housing.	As part of Goal 105, this policy was adopted to provide a framework for land acquisition for the next 20 years. Currently, the Monroe County Land Authority donates property for affordable housing. To further implement this policy the County will complete the LAMP. This plan will contain a strategy for funding land acquisition for conservation, recreation, retirement of development rights, and sites for affordable and employee housing.	Yes.	No amendments necessary.



Policy 105.2.10 Primarily focus Land Acquisition Program on Tier I and Tier II and scarified or disturbed lots for affordable housing.	As part of Goal 105, this policy was adopted to provide a framework for land acquisition for the next 20 years. Currently, the Monroe County Land Authority donates property for affordable housing. To further implement this policy the County will complete the LAMP. This plan will contain a strategy for funding land acquisition for conservation, recreation, retirement of development rights, and sites for affordable and employee housing.	Yes.	No amendments necessary.
Policy 601.1 Implement policies including a monitoring program, to reduce by 50% the affordable housing need for very low and low-income classification.	The housing authority currently monitors the affordable housing need in Monroe County.	Yes.	This policy may be amended to reflect a more realistic number for reducing affordable housing need.
Policy 601.1.1 Complete housing assessment (for affordable and special needs housing) based on 1990 Census and supplemental inventory.	The housing authority has completed the Comprehensive Housing Affordability Strategy.	Yes.	No amendments necessary.
Policy 601.1.2 Adopt LDR's which include a positive point rating for affordable housing in the permit allocation system.	Affordable housing receives plus 5 (+5) points under the current ROGO system.	Yes.	No amendments necessary.
Policy 601.1.3 Assign housing planning responsibilities and develop Comprehensive Housing Affordability Strategy.	The Housing Authority has completed the Comprehensive Housing Affordability Strategy.	Yes.	No amendments necessary.
Policy 601.1.4 Expand County's participation in Federal and State housing assistance programs for rehabilitation of housing for low and moderate-income residents.	The Housing Authority continuously seeks state and federal funding for rehabilitation of housing for low and moderate-income residents.	Yes.	No amendments necessary.
Policy 601.1.5 Define programs to maximize private sector and non-profit organizations' involvement in the provision	No amendments to policy. The LAMP will identify various programs to assist and promote private sector and non-profit	No.	No amendments necessary.



of low- and moderate-income housing.	organizations involvement in providing affordable housing.		
Policy 601.1.6 Monroe County Land Authority to compile a list of sites for affordable housing.	The Monroe County Housing Authority donates available property for the development of affordable housing. The County will complete the LAMP in order to prioritize property for acquisition for affordable housing.	Yes.	No amendments necessary.
Policy 601.1.7 Require that affordable housing remain affordable on a long-term basis.	The LDRs require that affordable housing remain restricted for 50 years in order to receive incentives such as maximum net density, ROGO points, etc.	Yes.	No amendments necessary. The Growth Management Division will review amendments to consider increasing the length of period an affordable housing unit must remain in the affordable housing pool.
Policy 601.1.8 Land donations for affordable housing assessed by guidelines.	All land to be used for affordable housing is evaluated using the ROGO evaluation. The Tier System will further simplify this evaluation by categorizing all lands into one of three tiers. Affordable housing will be encouraged in Tier III or the least environmentally sensitive lands.	Yes.	No amendments necessary.
Policy 601.1.9 Identify funding sources for non-profit organizations for provision of affordable housing .	The County continuously coordinate with the housing authority to identify funding sources for affordable housing.	Yes.	No amendments necessary.
Policy 601.1.10 Participate in the State Housing Incentives Partnership (SHIP) program.	Monroe County participates in the State Housing Incentives Partnership (SHIP)	Yes.	No amendments necessary.
Policy 601.1.11 Adopt LDR's with permit allocation system providing 20 percent of annual permits for affordable housing based on specified eligibility requirements.	The existing LDRs sets aside 20% of available ROGO allocations for affordable housing. The County Commission has the authority to raise the ratio, if necessary.	Yes.	No amendments necessary.
Policy 601.1.12 Adopt LDR's to include density bonuses, impact fee waiver programs, and other regulations to encourage affordable housing.	The existing LDRs currently have the following incentives for affordable housing: bonus density in areas zoned Urban Residential (UR), Mixed-Use (MU), Suburban Commercial (SC),	Yes.	No amendments necessary.



	waiver of impact fees, positive points in the ROGO evaluation system.		
Policy 601.1.13 Land Authority to coordinate with developers of affordable housing when land acquisitions or donation requests are submitted.	Monroe County Land Authority coordinates with various developers in the provision of affordable housing.	Yes.	No amendments necessary.
Policy 601.1.14 Prohibit Land Authority from designating as affordable housing sites land which contains threatened and endangered species or sensitive habitat.	The Land Authority does not donate sensitive habitat for affordable housing.	Yes.	No amendments necessary.
Policy 601.1.15 Annually monitor the eligibility of the recipients of affordable housing benefits with option of taking specified actions.	The Planning Department annually monitors the affordable housing allocations from the ROGO system to ensure that these units remain in the affordable housing pool.	Yes.	No amendments necessary.
Objective 601.6 Implement housing programs to expand public information, incentive programs in conjunction with Permit Allocation System, and elimination of substandard housing	The Monroe County Housing Authority regularly provides public information regarding programs for affordable housing. The ROGO system provides a separate allocation pool for affordable housing.	Yes.	No amendments necessary.
Policy 1301.5.5 Work with the Housing Authority to encourage development of elderly and institutional housing and identify funding sources for community-based non-profit organizations to provide affordable housing for low-income residents.	The County through the Land Authority, and the Growth Management Division, coordinate with the Housing authority on improving the affordable housing stock	Yes.	No amendments necessary.



Summary

To implement the objectives and policies in the Comprehensive Plan designed to improve the conditions for affordable housing, the following actions were taken:

- Amend Policy 101.2.4 to ensure that unused affordable housing ROGO allocations would roll over from year to year and not be transferred to the market-rate housing allocation.
- The Monroe County Land Authority donated land for the construction of affordable housing.
- As an incentive for mixed income projects, the 20% market rate housing permitted in employee housing projects will qualify for +3 points in ROGO.
- Adopt Goal 105 to establish a framework for prioritizing the acquisition of property for habitat protection, the retirement of development rights, and **sites for the development of affordable and employee housing.**

Recommendations

To further improve the conditions for affordable housing in Monroe County, the following actions need to be taken:

- Complete the Land Acquisition Master Plan which will establish the priority and a mechanism for acquiring sites for the development of affordable and employee housing.
- Produce a yearly report on the development of affordable housing.



**MONROE COUNTY
EVALUATION AND APPRAISAL REPORT
ISSUE: HABITAT PROTECTION**

Background

As a unique environment and the home to numerous endangered and threatened species of plants and animals, Monroe County has the role of being a caretaker to ensure the viability and continued survival of these threatened and endangered plants and animals. Various agencies in the Florida Keys have undertaken different programs and studies to protect the habitat of these various plants and animals.

Studies such as the Florida Keys Carrying Capacity Study (FKCCS) were designed to establish a rate of growth and a set of development standards to ensure that future growth does not exceed the capacity of the county's environment and marine system to accommodate additional impacts.

In addition to these studies, the County, State and Federal governments have undertaken on an aggressive land acquisition program to preserve these sensitive lands for posterity under public protection. Other actions such as the implementation of the Stormwater Management Master Plan and the Sanitary Wastewater Master Plan are designed to improve natural habitat.

Furthermore, since the adoption of the Comprehensive Plan, numerous Comprehensive Plan amendments and changes to the Land Development Regulations have been adopted for the purpose of protecting crucial and endangered habitat.

Florida Keys Carrying Capacity Study

As directed in the Final Order for the adoption of the Comprehensive Plan, the Work Program required the completion of the Florida Keys Carrying Capacity Study (FKCCS). As stated in Rule 28-20.100 F.A.C., *"The carrying capacity analysis shall be designed to determine the ability of the Florida Keys ecosystem and the various segments thereof, to withstand all impacts of additional land development activities."* This study was jointly funded by the US Army Corps of Engineers and the Department of Community Affairs. As stated previously, the study intended to find the threshold where the Florida Keys environment can no longer sustain itself due to growth and development.



The draft report and the final peer review for the FKCCS was completed in January 2003. After extensive review by the National Research Council (NRC), it was determined *that the peer reviewed scientific information proved insufficient to develop a comprehensive carrying capacity framework that would allow for indisputable determinations of whether future development scenarios fall within the carrying capacity of the Florida Keys* (Source: Florida Keys Carrying Capacity).

Follow up peer review of the study further concluded that only the terrestrial module of the Carrying Capacity Impact Analysis Model and recommendations supporting the terrestrial habitats provides a workable scientific basis for determining the impacts of development in a spatial framework as regards to the functional integrity of significant wetlands and upland habitat and the habitat and range of protected animal species.

Despite the limitations of the model, the County did take the initiative to move forward on implementing the FKCCS before the study draft was completed in September 2002. In 2002, the County adopted Goal 105 of the 2010 Comprehensive Plan to provide a framework for implementing the FKCCS and the long-term development of the County. Goal 105 states that:

Monroe County shall undertake a comprehensive land acquisition program and smart growth initiatives in conjunction with its Livable CommuniKeys Program in a manner that recognizes the finite capacity for new development in the Florida Keys by providing economic and housing opportunities for residents without compromising the biodiversity of the natural environment and the continued ability of the natural and man-made systems to sustain livable communities in the Florida Keys for future generations.

Objectives of Goal 105

The Tier System

Part of the implementation of Goal 105 is the creation of a Tier Overlay District (Tier System). The purpose of the Tier System is to designate all lands outside of mainland Monroe County into one of three tiers for the following purposes:

1. Assigning ROGO and NROGO points;
2. Determining the amount of clearing of upland native vegetation that may be permitted; and
3. Prioritizing of lands for public acquisition.



The Tier boundaries are designated using aerial photography, data from the Florida Keys Carrying Capacity Study (FKCCS), the endangered species maps, property information, and field evaluation. At a minimum the following criteria are used to evaluate upland habitats and designate boundaries between the three Tiers.

Tier I

- Natural areas including old and new growth upland native vegetated areas, above 4 acres and a buffer of private owned vacant lots and parcels.
- Vacant land to connect patches and reduce further fragmentation.
- A buffer up to 500 feet if indicated, between natural areas and development to reduce secondary impacts; canals or roadways, depending on size may form a boundary.
- Lands designated for acquisition by public agencies.
- Known locations of threatened and endangered species.
- Native Area Land Use district and other districts in buffer/restoration area as appropriate.
- Lands with a potential for successful land management restoration of disturbed habitat, removal of exotics, and connection of patches.
- Areas with minimal existing development.

Tier I areas will have the highest priority for land acquisition and will have permitted clearing of 10%.

Tier II

- Subdivisions less than 50% developed, or portions of subdivisions that are less than 50% developed because of environmental constraints.
- Fragmented, unconnected hammock patches of less than 4 acre, which are isolated from larger natural areas by existing development.
- Developed and undeveloped Suburban Residential District (SR) or Sparsely Settled Residential District (SS) lots with upland native habitat.
- Platted lots in areas where adjoining property owner(s) may purchase the lots with county participation.

Tier II lots will have the second priority for land acquisition and will have permitted clearing of 40%.



Tier III

- Isolated upland habitat fragments of less than half an acre.
- Substantially developed subdivisions near established commercial areas.
- Primarily Improved Subdivision District (IS) and Urban Residential-Mobile Home District (URM) lots.

Tier III lots will have the third highest priority for land acquisition and will have permitted clearing of 60%.

In addition to the existing habitat protection policies in the Comprehensive Plan, Goal 105 will be the basis from which the County can evaluate and appraise the effectiveness of the Comprehensive Plan in protecting native habitat.

Table 1.2 below summarizes the amount of Conservation and Natural Areas proposed to be acquired under the Tier System. The boundaries of acquisition lands under the Florida Forever program is to be expanded by a total of 3,319 acres.

Table 1.2 Summary of Conservation & Natural Areas Acquisition Plan

Location	Total	Total Public Owned	Total Private Vacant (Florida Forever and Federal Refuge Acquisition Land)	Private Vacant CARL	Private Vacant Federal Refuge Acquisition Land	Remaining Private Vacant Land (To be acquired as part of expansion of the Florida Forever acquisition program)
Upper Keys	15287	12999	1793	193	92	1508
Middle Keys	943	804	124	111	0	14
Big Pine and No Name Keys	6695	4959	1037	864	166	6
Lower Keys (excluding Big Pine/No Name Keys)	24094	17209	5594	2303	1501	1791
County Total	47019	35971	8548	3471	1759	3319



The Livable CommuniKeys Plan for Big Pine/No Name Keys

The completion of the LCP for Big Pine/No Name Keys implements Objective 101.20 of the Comprehensive Plan. In addition, the development activities proposed in the Plan are designed to preserve the integrity and character of Big Pine/No Name Key while also ensuring the protection and viability of the endangered habitat of Big Pine/No Name Keys. These development guidelines include:

- Residential units at a rate of roughly 10 per year for a total of 200 units,
- New commercial development, limited to 2,400 square feet a year, around existing commercial areas, mainly along the U.S. 1 corridor,
- New recreational facilities constructed on existing developed or disturbed/scarified lots,
- Limited expansion of community uses, churches, public offices, wastewater facilities, and the existing fire station, and
- The widening of local, paved roads to accommodate bicycle paths, and storm water and sanitary sewer infrastructure and a third lane on U.S. 1.

The recommendations of the LCP and its implementation will further serve to meet the objectives and policies of the Comprehensive Plan.

Key Deer Habitat Conservation Plan (HCP)

This plan was a multi-agency project involving the Florida Department of Transportation (FDOT), Monroe County, and the Florida Department of Community Affairs (DCA). As submitted, the plan is designed to address impacts to endangered species resulting from potential development activities over a 20-year period in Big Pine Key and No Name Key.

The HCP establishes the guidelines under which covered activities may occur and describes a conservation and mitigation strategy to minimize and mitigate for the incidental take of threatened and endangered species during development activities.

The findings and the recommendations in the HCP in addition to the other studies and activities documented above all serve as integral tools in the implementation of the Comprehensive Plan.



Evaluation and Analysis of Comprehensive Plan Objectives and Policies

Objectives, Policies Summary	Current Conditions/Amendments to Policy since original adoptions	Is Objective or Policy being accomplished or being implemented?	Need for future Comprehensive Plan amendments.
Objective 101.5 Implement a Point Allocation System to direct future growth.	Monroe County adopted the Rate of Growth Ordinance (ROGO) in 1992.	Yes.	No amendments necessary.
Policy 101.6.6 Base acquisition decisions for lands denied permit allocation on environmental sensitivity.	ROGO continues to be in effect until a new Tier System for allocation of points is adopted. The Tier System classifies all lands into three categories. The most environmentally sensitive is Tier I followed by Tier II and Tier III being the least sensitive. Land acquisition will be prioritized based on environmental sensitivity.	Yes.	No amendments necessary.
Objective 101.11 Direct growth away from environmentally sensitive areas.	ROGO continues to be in effect until a new Tier System for allocation of points is adopted. The Tier System simplifies the point allocations by classifying all lands into three categories. The most environmentally sensitive is Tier I followed by Tier II and Tier III being the least sensitive.	Yes.	No amendments necessary.
Objective 102.1 Require new developments to comply with environmental criteria.	Ordinance 07-2002 amended the LDRs to include stronger language for environmental protection.	Yes.	No amendments necessary
Objective 102.2 Adopt LDRs which require compliance with environmental design standards. Revise LDRs to require new development to further protect disturbed wetlands, native upland vegetation and beach berm areas.	Ordinance 07-2002 amended the LDRs to include stronger language for environmental protection.	Yes.	No amendments necessary
Policy 102.2.1 Adopt revised environmental standards and environmental design criteria to prevent the loss of disturbed wetlands.	Ordinance 07-2002 amended the LDRs to include stronger language for environmental protection.	Yes.	No amendments necessary
Policy 102.2.2 Revise the environmental	Ordinance 07-2002 amended the LDRs to	Yes.	No amendments necessary.



standards and environmental design criteria to protect upland habitats.	include stronger language for environmental protection.		
Policy 102.2.3 Revise the environmental standards and environmental design criteria to protect beach/berm areas.	Ordinance 07-2002 amended the LDRs to include stronger language for environmental protection.	Yes.	No amendments necessary
Objective 102.3 Adopt LDR's directing development to environmentally suitable lands.	Ordinance 07-2002 amended the LDRs to include stronger language for environmental protection.	Yes.	No amendments necessary
Policy 102.3.1 In developing Permit Allocation and Point Systems, consider assigning negative points based upon occurrence of natural resources, natural hazards, and/or utilization of best management practices.	Under the current ROGO system, negative points are awarded based on type and quality of existing vegetation, whether the property impacts threatened or endangered species, is a critical habitat area, or is in the coastal high hazard area or is a part of the coastal barrier resources system.	Yes.	No amendments necessary.
Policy 102.3.2 Require development clustering to avoid environmental impacts.	Ordinance 07-2002 amended the LDRs to include stronger language for environmental protection.	Yes.	No amendments necessary.
Objective 102.4 Establish the Monroe County Natural Heritage and Park Program.	Not completed. As part of the implementation of Goal 105, a Land Acquisition Master Plan (LAMP) will be completed. The LAMP will replace the Monroe County Natural Heritage and Park Program.	No.	Amendment to change reference to the Monroe County Natural Heritage and Park Program to the Land Acquisition Master Plan.
Policy 102.4.1 Develop and implement the Monroe County Natural Heritage and Park Program.	Not completed. As part of the implementation of Goal 105, a Land Acquisition Master Plan (LAMP) will be completed. The LAMP will replace the Monroe County Natural Heritage and Park Program.	No.	Amendment to change reference to the Monroe County Natural Heritage and Park Program to the Land Acquisition Master Plan.
Policy 102.4.2 Identify types of lands to be considered for acquisition.	Not completed. The completion of the LAMP will identify and prioritize lands for acquisition.	No.	Amendment to change reference to the Monroe County Natural Heritage and Park Program to the Land Acquisition Master Plan.
Policy 102.4.3 Develop priority list of Natural Heritage and Park Program acquisition sites.	Not completed. The completion of the LAMP will identify and prioritize lands for acquisition.	No.	Amendment to change reference to the Monroe County Natural Heritage and Park Program to the Land



			Acquisition Master Plan.
Policy 102.4.5 Make application for grant funds.	Monroe County participates in various land acquisition programs such as the Florida Forever program. Monroe County continues to pursue funding from various sources for land acquisition. With the implementation of Goal 105 through the LAMP, a strategy for funding land acquisition and a priority list for land acquisition will be developed.	Yes.	No amendments necessary.
Policy 102.4.6 Manage acquired land for the Natural Heritage and Park Program to preserve and protect conservation purpose for which it was acquired.	Monroe County has a Land Steward who is responsible for the management of acquired land. Furthermore, a focus of the LAMP will be the development of management strategies for the acquired lands.	Yes.	No amendments necessary.
Objective 102.7 Regulate activities on offshore islands.	Ordinance 07-2002 amended the LDRs to include stronger language for environmental protection. Under the new Tier System, offshore islands will be classified as Tier I lands.	Yes.	No amendments necessary.
Policy 102.7.1 Input offshore island data into GIS.	Complete. The County continues to improve and update GIS database.	Yes.	No amendments necessary.
Policy 102.7.2 Adopt LDRs which further protect offshore islands.	Ordinance 07-2002 amended the LDRs to include stronger language for environmental protection. Under the new Tier System, offshore islands will be classified as Tier I lands.	Yes.	No amendments necessary.
Policy 102.7.3 In developing Permit Allocation and Point Systems, consider assigning negative points to developments on offshore islands.	Ordinance 07-2002 amended the LDRs to include stronger language for environmental protection. Under the new Tier System, offshore islands will be classified as Tier I lands and will receive zero (0) points in evaluation.	Yes.	No amendments necessary.
Objective 102.9 Complete and implement a cooperative land management program for private and county-owned lands located within and adjacent to parks and conservation lands.	Not completed. The County will complete the LAMP which will have an element for managing properties (private and public) adjacent to conservation and natural areas.	No.	No amendments necessary.



Policy 102.9.1 In developing Permit Allocation and Point Systems, consider assigning a negative point to developments proposed within Conservation Land Protection Areas.	Under the current ROGO system, development which may negatively impact conservation land protection areas receive minus two (-2) points.	Yes.	No amendments necessary.
Policy 102.9.2 Identify activities on private lands having impacts on conservation lands.	Under the Tier System lands have been classified based on their function and location within an area. Therefore, lands adjacent to conservation areas will be given a Tier ranking similar to the adjacent conservation areas. Furthermore, the LAMP will provide a management strategy for lands adjacent to conservation areas.	Yes.	No amendments necessary.
Policy 102.9.3 Identify Conservation Land Protection Areas for all conservation lands.	Under the Tier System lands have been classified based on their function and location within an area. Therefore, lands adjacent to conservation areas will be given a Tier ranking similar to the adjacent conservation areas. Furthermore, the LAMP will provide a management strategy for lands adjacent to conservation areas.	Yes.	No amendments necessary.
Policy 102.9.4 Develop management plans for each Conservation Land Protection Area.	The completion of the LAMP will provide a management plan for all lands adjacent to conservation lands.	Yes.	No amendments necessary.
Policy 102.9.5 Review and revise management plans for Conservation Land Protection Areas every three years.	The completion of the LAMP will provide a management plan for all lands adjacent to conservation lands. The LAMP will also provide policies for continuing updates of the strategies.	Yes.	No amendments necessary.
Policy 102.9.6 Develop management plans for new conservation lands within 18 months of acquisition.	The completion of the LAMP will provide a management plan for all properties acquired by Monroe County for conservation.	Yes.	No amendments necessary.
Objective 103.1 Regulate future development in the Big Pine Key in order to protect the Key deer and its habitat and to maintain the community character.	The Livable CommuniKeys Master Plan for Big Pine and No Name Key was completed in 2003, the Habitat Conservation Plan was completed in 2003.	Yes.	This objective is being amended to include language that the Livable CommuniKeys Master Plan and the Habitat



			Conservation Plan for Big Pine Key and No Name Key will serve as additional regulations for future development and coordination of public facilities in Big Pine and No Name Key.
Policy 103.1.1 Ensure long-term viability of the Key deer by directing development away from areas necessary to protect the Key deer habitat from the impacts of development. Development may be allowed in accordance with the Permit Allocation and Point Systems.	Completion of the Big Pine/No Name Keys LCP established that point allocation on Big Pine will be based on the Tier System.	Yes.	This policy is proposed to be deleted and replaced by a point system based on the Tier System.
Policy 103.1.2 Adopt LDRs which replace the ACCC zoning designation with zoning categories consistent with the Future Land Use Map.	The Tier System will create an overlay zoning district that will categorize lands within ACCC as Tier I, which are considered to be conservation and natural areas.	No.	This policy is proposed to be deleted. The County will propose land use amendments to designate these lands as conservation.
Policy 103.1.3 Identify Key deer habitat areas as priority acquisition sites.	The creation of the Tier System established Key Deer habitat as environmentally sensitive Tier I areas, which are the highest priority for public acquisition.	Yes.	No amendments necessary.
Policy 103.1.4 Support public agency and private organizations efforts to acquire Key deer habitat for conservation purposes.	Monroe County supports various agencies in their efforts to acquire Key Deer habitat for conservation purposes. Furthermore, the establishment of the Tier System classified lands such as Key Deer habitat as environmentally sensitive Tier I areas, which are a priority for acquisition.	Yes.	No amendments necessary. Monroe County continues to coordinate with state and federal agencies in acquiring environmentally sensitive lands.
Policy 103.1.5 Implement special measures to protect the quantity and quality of groundwater recharge to freshwater lenses. Commercial use of freshwater lenses is to be discouraged.	The Big Pine/No Name Key Livable CommuniKeys Master Plan created new strategies and actions designed to protect groundwater and freshwater lenses on Big Pine/No Name Key.	Yes.	These new strategies and actions specified in the Big Pine Key LCP will be adopted as part of the Comprehensive Plan.
Policy 103.1.6 Monitor FKAA compliance with	The County and FKAA continuously communicate regarding FKAA activities on	No.	Delete policy.



federal regulations.	Big Pine/No Name Keys. However, the County has no authority to oversee FKAA compliance with federal regulations.		
Policy 103.1.7 Complete and implement a cooperative land management program for private and county-owned lands within and adjacent to parks and conservation lands.	The LAMP will include a management program for lands adjacent to conservation and natural areas. The LAMP will specify the roles that different agencies will have in managing these lands.	Yes.	No amendments necessary.
Policy 103.1.8 Revise Habitat Evaluation Index to give greater consideration of habitat of species of special status.	The Habitat Evaluation Index (HEI) adds points for habitat presumed to provide refuge for listed animal species. However, the HEI is found to be flawed since it does not always completely reflect the role of a parcel within an overall system. Therefore, the Tier System has been developed to look at lands on a systemwide basis.	Yes.	Policy to be deleted. The implementation of the Tier System will eliminate the need for HEIs. However, elimination of the HEI does not preclude on-site vegetative analysis.
Policy 103.1.9 Revise LDR clustering revisions to reduce the consumption and fragmentation of Key deer habitat.	Ordinance 007-2002 (LDR Sec. 9.5-345 General Environmental Design Criteria) includes LDR language requiring clustering of development to reduce habitat fragmentation and preserves the largest possible area of contiguous undisturbed habitat.	Yes.	No amendments necessary. However, LDR amendments implementing the Tier System will further enhance the clustering requirements for conservation and natural areas.
Policy 103.1.10 Adopt LDRs pertaining to the siting of new public facilities on Big Pine Key.	The completion of the LCP establishes a vision and strategies for the proper location of new public facilities on Big Pine Key.	Yes.	Policy to be deleted. Amendments based on the findings of the LCP will be adopted.
Policy 103.1.11 Implement TSM techniques to relieve localized traffic constraints.	The completion of the LCP and HCP establishes a vision and strategies for improving localized traffic concerns.	Yes.	Policy to be deleted. Amendments based on the findings of the LCP will be adopted.
Policy 103.1.12 Initiate traffic engineering study to study the impacts of enhancing traffic capacity on Big Pine Key.	The completion of the HCP studied the impacts of future road construction in Big Pine Key.	Yes.	Policy to be deleted. Amendments based on the findings of the HCP will be adopted.
Policy 103.1.13 Implement activities to prohibit the destruction of the Key deer and to protect	The completion of the LCP and HCP establishes a vision for development on Big Pine Key without significant impact to the Key	Yes.	Amendments based on the findings of the HCP and LCP will be adopted.



its habitat.	Deer and its habitat.		
Policy 103.1.14 Discourage tour groups on Big Pine Key.	The completion of the LCP and HCP establishes a vision for development on Big Pine Key without significant impact to the Key Deer and its habitat.	Yes.	Policy to be deleted. The Big Pine/No Name Key LCP as an action item discourages tour buses from the planning area.
Policy 103.1.15 Restore disrupted wetland and native upland vegetation systems on public lands.	The LAMP will have as an element a strategy for restoring wetlands and upland vegetation on public lands.	Yes.	Policy to be deleted.
Objective 103.2 Regulate future development and the coordination of public facilities in the North Key Largo ACCC in order to preserve the habitat of four endangered species.	Proposed changes to Rule 28.20 would prohibit development of public facilities in North Key Largo ACCC.	Yes.	No amendments necessary.
Policy 103.2.1 In developing Permit Allocation and Point Systems, consider assigning points to encourage developments which do not consume or fragment hammocks.	The Tier System categorizes lands into categories based on environmental sensitivity and limits the clearing of hammocks. Under the proposed Tier System for ROGO allocations. Development in hammock areas (Tier I) will receive 0 points. Furthermore changes will be made to encourage aggregation of lands and limit clearing in Tier I lands to 10%.	Yes.	No amendments necessary.
Policy 103.2.2 Revise the Habitat Evaluation Index to give greater consideration to the habitat of species of special status.	The Habitat Evaluation Index (HEI) adds points for habitat presumed to provide refuge for listed animal species. However, the HEI is found to be flawed since it does not always completely reflect the role of a parcel within an overall system. Therefore, the Tier System has been developed to look at lands on a systemwide basis.	Yes.	Policy to be deleted. The implementation of the Tier System will eliminate the need for HEIs. However, elimination of the HEI does not preclude on-site vegetative analysis.
Policy 103.2.3 Revise LDR clustering revisions to reduce the consumption and fragmentation of hardwood hammock areas.	The existing LDRs includes rules that require clustering of development on sensitive habitat.	Yes.	No amendments necessary. However, under the proposed amendments to implement the Tier System for ROGO allocations, language will be included to



			encourage clustering of development and limit clearing to 10% in sensitive lands.
Policy 103.2.4 Adopt LDRs pertaining to the siting of new public facilities in the North Key Largo ACCC.	Proposed changes to Rule 28.20 would prohibit development of public facilities in North Key Largo ACCC.	Yes.	No amendments necessary.
Policy 103.2.6 Implement activities to prohibit the destruction of the American crocodile, Schaus' swallowtail butterfly, Key Largo wood rat and the Key Largo cotton mouse.	The County currently requires a coordination letter from the Fish and Wildlife Service (FWS) when developing in known habitat for endangered and threatened species. Under the proposed Tier System sensitive lands such as habitat for protected species, will have top priority for land acquisition.	Yes	No amendments necessary.
Policy 103.2.7 Identify native upland habitats as priority acquisition sites for conservation purposes.	The Tier System categorizes lands into categories based on environmental sensitivity. Under the proposed Tier System sensitive lands such as native upland habitats will have top priority for land acquisition.	Yes.	No amendments necessary.
Policy 103.2.8 Complete and implement a cooperative land management program for private and county-owned lands within adjacent to parks and conservation lands.	Not completed. The County will complete the LAMP which will have an element for managing properties (private and public) adjacent to conservation and natural areas.	No.	No amendments necessary. The County will complete the LAMP to facilitate implementation of this objective.
Policy 103.2.9 Support public agency and private organization efforts to acquire land for conservation purposes.	The creation of the Tier System established categories for prioritizing land for acquisition.	Yes.	No amendments necessary. Amendment will be adopted to implement the Tier System which will prioritize lands for acquisition. Monroe County continues to coordinate with state and federal agencies in acquiring environmentally sensitive lands.
Policy 103.2.10 Discourage private development in areas designated as units of	Under the current ROGO system, development in CBRS receives major negative points.	Yes.	No amendments necessary.



the CBRS.			
Policy 103.2.11 Require an archeological/historical review of proposed development sites prior to issuing a building permit or development approval in North Key Largo.	When a development application is received for the North Key Largo area, the planning department requires an archaeological historical review of site.	Yes.	No amendments necessary.
Policy 103.2.12 Require the Monroe County Biologist visit the site of all development approval and building permit applications prior to issuing a building permit or development approval in North Key Largo.	Monroe County Biologists conduct a site visit for building permits or development approvals on North Key Largo. Furthermore, the County requires a Technical Coordination Letter from FWS for proposed development in North Key Largo.	Yes.	No amendments necessary.
Policy 103.2.13 Require all applicants to obtain all federal and state approvals prior to issuing a building permit or development approval	LDRs have been amended requiring applicants to obtain all federal and state approvals prior to receiving a building permit.	Yes.	No amendments necessary.
Policy 103.2.14 Work with USFWS to prohibit destruction of the federally-designated threatened and endangered species and their habitats.	A Technical Coordination Letter from FWS is required for all development in North Key Largo.	Yes.	No amendments necessary.
Objective 103.3 Regulate future development in the Ohio Key ACCC to protect the habitat value and environmental sensitivity of the wetland system.	The Ohio Key ACCC has been acquired by the FWS and is now under public ownership.	Yes.	Delete policy.
Policy 103.3.1 Prohibit new or expanded hotel/motel development including RV spaces and campsites and retain existing LDR's which limit land uses and establish wildlife habitat protection measures for the piping plover on the Atlantic-side portion of Ohio Key.	The Ohio Key ACCC has been acquired by the FWS and is now under public ownership.	Yes.	Delete policy.
Policy 103.3.2 Support FWS with its planned acquisition of the piping plover wintering grounds on Ohio Key.	The Ohio Key ACCC has been acquired by the FWS and is now under public ownership.	Yes.	Delete policy.
Policy 103.3.3 In developing Permit Allocation	Under the current ROGO system. Development within known habitat of	Yes.	No amendments necessary.



and Point Systems, consider assigning negative points to discourage development which may adversely impact activities of the piping plover on their wintering grounds.	threatened or endangered species receive minus 10 points. (-10).		
Objective 103.4 Revise LDR's to address issues in focal point plans for all ACCC designations.	Establishment of the Tier System categorizes lands into categories based on environmental sensitivity, the Tier System will eliminate the need for ACCC designations. Furthermore the development of the LCP will replace the need for focal point plans.	Yes.	No amendments necessary.
Policy 103.4.1 Revise LDR's to eliminate ACCC designations from Holiday Isle, Big Pine Key, North Key Largo, and Ohio Key.	Establishment of the Tier System categorizes lands into categories based on environmental sensitivity, the Tier System will eliminate the need for ACCC designations. Furthermore the development of the LCP will replace the need for focal point plans.	Yes.	No amendments necessary.
Objective 203.1 Implement regulations to protect mangroves.	Ordinance 007-2002 (LDR Sec. 9.5-345 General Environmental Design Criteria) sets standards for design in areas with mangroves.	Yes.	No amendments necessary.
Policy 203.1.1 Adopt LDR's which continue to prohibit placement of fill in mangroves.	Ordinance 007-2002 (LDR Sec. 9.5-345 General Environmental Design Criteria) includes LDR language that limits development in mangroves.	Yes.	No amendments necessary.
Policy 203.1.2 Adopt mangrove trimming ordinance	Ordinance 007-2002 (LDR Sec. 9.5-345 General Environmental Design Criteria) includes LDR language that requires trimming and/or removal of mangroves to meet FDEP requirements.	Yes.	No amendments necessary.
Objective 203.2 Implement regulations to protect seagrasses.	The County has adopted various ordinances to establish rules regarding the building of docks and mooring fields over seagrass beds.	Yes.	No amendments necessary.
Policy 203.2.1 Prohibit location of mooring sites over seagrasses and hard bottom communities with exceptions.	The County has adopted various ordinances to establish rules regarding the building of docks and mooring fields over seagrass beds.	Yes.	No amendments necessary.
Policy 203.2.2 Prohibit location of docks and piers and other construction over seagrasses	LDR Section 9.5-349 allows docks to terminate over seagrass beds if water depth at terminal platform is at least four (4) feet at	Yes.	No amendments necessary.



with specified exceptions.	Mean Low Water.		
Policy 203.2.3 Adopt LDR's which continue to prohibit all new dredging and to prohibit maintenance dredging in areas vegetated with seagrasses, except for that required to retain public navigation access.	Ordinance 007-2002 (LDR Sec. 9.5-345 General Environmental Design Criteria) includes LDR language that restricts dredging within areas vegetated with seagrass beds except for maintenance dredging in public navigation channels.	Yes.	No amendments necessary.
Policy 203.2.4 Seek to enter into interagency agreements regarding Monroe County support for special studies of seagrass beds.	Monroe County regularly coordinates with state and federal agencies regarding conservation, protection and studies of seagrass beds. The Marine Resources Department is responsible for this coordination task.	Yes.	No amendments necessary.
Policy 203.2.5 Support public education program of the FKNMS Management Program related to seagrass bed conservation.	Monroe County regularly coordinates with state and federal agencies regarding conservation, protection and studies of seagrass beds. The Marine Resources Department is responsible for this coordination task.	Yes.	No amendments necessary.
Policy 203.2.6 Enter digital information into the GIS describing the seagrass beds of the FKNMS.	A GIS layer exists with seagrass beds.	Yes.	No amendments necessary.
Objective 203.3 Support state and federal agencies in development and implementation of measures to protect coral reefs of the FKNMS.	Monroe County regularly coordinates with state and federal agencies regarding conservation, protection and studies of coral reefs. The Marine Resources Department is responsible for this coordination task.	Yes.	No amendments necessary.
Policy 203.3.1 Seek to enter into interagency agreements regarding Monroe County support for special studies of coral reefs.	Monroe County regularly coordinates with state and federal agencies regarding conservation, protection and studies of coral reefs. The Marine Resources Department is responsible for this coordination task.	Yes.	No amendments necessary.
Policy 203.3.2 Support public education program of the FKNMS Management Program related to coral reef conservation.	Monroe County regularly coordinates with state and federal agencies regarding conservation, protection and studies of coral reefs. The Marine Resources Department is responsible for this coordination task.	Yes.	No amendments necessary.



Policy 203.3.3 Enter digital information into the GIS describing the coral communities of the FKNMS.	Digital information about the coral communities are available from the FKNMS.	Yes.	No amendments necessary.
Policy 203.3.4 Continue to protect, preserve and enhance the coral reef through the adoption of LDR's.	The County has adopted LDRs to implement the findings of the SWMP and SMMP to improve water quality and improve offshore environment.	Yes.	No amendments necessary.
Objective 203.4 Support state and federal agencies in development and implementation of measures to protect fisheries of the FKNMS.	The County regularly coordinates with state and federal agencies in developing and implementing measures to protect fisheries of the FKNMS. The Marine Resources Department is the designated county agency for the coordination activities.	Yes.	No amendments necessary.
Policy 203.4.1 Coordinate with state and federal agencies regarding land management problems in the region which may affect water quality and fisheries in Florida Bay.	The County regularly coordinates with state and federal agencies regarding water quality and fisheries in the Florida Bay. The County actively participates in the implementation of the CERP.	Yes.	No amendments necessary.
Policy 203.4.2 Continue to propose actions to the Florida Marine Commission to reduce impacts of the Lobster Sportfishing Season on the lobster fishery.	No change.	No.	No amendments necessary.
Policy 203.4.3 Meet with the Florida Marine Fisheries Commission to assess measures which could be taken by County to protect fisheries.	The County regularly coordinates with the Florida Marine Fisheries Commission. The Marine Resources Department is the designated county agency for the coordination activities.	Yes.	No amendments necessary.
Policy 203.4.4 Support efforts to develop a comprehensive fisheries management program for the Keys.	The County as necessary coordinates the National Marine Fisheries Fisheries Agency, and the Florida Marine Fisheries Council on fisheries management programs.	Yes.	No amendments necessary.
Policy 203.4.5 Adopt a mangrove-trimming ordinance.	Ordinance 007-2002 (LDR Sec. 9.5-345 General Environmental Design Criteria) includes LDR language that requires trimming and/or removal of mangroves to meet FDEP requirements.	Yes.	No amendments necessary.



Policy 203.4.6 Develop and implement a boating impacts management program (addressing prop damage to seagrasses).	The County is implementing a channel marking program that is designed to protect seagrass beds.	Yes.	No amendments necessary.
Policy 203.4.7 Seek to enter into interagency agreements regarding Monroe County support for special studies of seagrasses and coral reefs.	Monroe County regularly coordinates with state and federal agencies regarding conservation, protection, and special studies for seagrasses and coral reefs. The Marine Resources Dept. is the designated county agency to accomplish this task.	Yes.	No amendments necessary.
Policy 203.4.8 Support private and non-profit groups and public agencies in promoting aquaculture.	The County supports the promotion of aquaculture.	Yes.	No amendments necessary.
Objective 204.1 Develop wetlands data base.	Monroe County continues to develop a wetlands database using the ADID, KEYWEP, and FKCCS.	Yes.	No amendments necessary.
Policy 204.1.1 Participate in Florida Keys FGFWFC ADID Program.	Monroe County Growth Management Division participated in the ADID program.	Yes.	No amendments necessary.
Policy 204.1.2 Cooperate in mapping of freshwater wetlands and disturbed wetlands.	Monroe County Growth Management Division participated in various programs to map freshwater wetlands and disturbed wetlands.	Yes.	No amendments necessary.
Policy 204.1.3 Plot revised county wetlands maps using GIS.	The County wetlands maps are continuously updated.	Yes.	No amendments necessary.
Policy 204.1 Develop wetlands functional assessment protocol in cooperation with state and federal agencies.	In cooperation with state and federal agencies the KEYWEP was developed as an early assessment tool for wetland functional classification.	Yes.	No amendments necessary.
Policy 204.1.5 Complete functional analysis of wetlands in cooperation with state and federal agencies.	The County coordinates with the ACOE, DEP and other agencies in the functional analysis of wetlands.	Yes.	No amendments necessary.
Policy 204.1.6 Complete annual updates of wetlands data base.	There is a continuous update of the wetlands database.	Yes.	No amendments necessary.
Objective 204.2 Eliminate the loss of undisturbed wetlands and the net loss of	Ordinance 007-2002 (LDR Sec. 9.5-345 General Environmental Design Criteria) includes LDR language that required 100%	Yes.	No amendments necessary



disturbed wetlands.	open space requirements for all wetlands other than disturbed salt marsh and buttonwood wetlands.		
Policy 204.2.1 Utilize Environmental Standards in the LDR's to protect submerged lands and wetlands. Require 100 percent open space for all wetlands other than disturbed salt marsh and buttonwood wetlands.	Ordinance 007-2002 (LDR Sec. 9.5-345 General Environmental Design Criteria) includes LDR language that required 100% open space requirements for all wetlands other than disturbed salt marsh and buttonwood wetlands.	Yes.	No amendments necessary.
Policy 204.2.2 Establish restrictions on filling in mangroves, submerged lands, salt ponds, and freshwater wetlands.	Ordinance 007-2002 (LDR Sec. 9.5-345 General Environmental Design Criteria) includes LDR language that prohibits filling in mangroves, wetlands, and submerged lands except for certain prescribed circumstances.	Yes.	No amendments necessary.
Policy 204.2.3 Establish restrictions on filling and structures in mangroves or wetlands with exceptions.	Ordinance 007-2002 (LDR Sec. 9.5-345 General Environmental Design Criteria) includes LDR language that prohibits filling in mangroves, wetlands, and submerged lands except for certain prescribed circumstances. Ordinance also limits types of facilities permitted in mangroves and wetlands.	Yes.	No amendments necessary.
Policy 204.2.4 No development activities shall be allowed in wetlands pending completion of ADID program or other similar functional assessment of disturbed wetlands.	Ordinance 007-2002 LDR Sec. 9.5-345 General Environmental Design Criteria) includes LDR language that disturbed wetlands proposed for filling will be evaluated by a County Biologist using the Keys Wetlands Evaluation Procedure (KEYWEP).	Yes.	No amendments necessary.
Policy 204.2.6 Adopt revised LDR's which match minimum vegetated setbacks. Review effectiveness during EAR process	Ordinance 007-2002 LDR Sec. 9.5-345 General Environmental Design Criteria) includes LDR language that requires a minimum vegetated setback of fifty feet for development occurring adjacent to all types of wetlands.	Yes.	No amendments necessary.
Policy 204.2.7 Require applicants to obtain all state and federal permits prior to making application to Monroe County for a permit to fill in wetlands.	Ordinance 007-2002 LDR Sec. 9.5-345 General Environmental Design Criteria) requires all projects obtain approval by the DEP and ACOE prior to issuance of County building permit.	Yes.	No amendments necessary.



Policy 204.2.8 Deny permits for dredge and fill activities undertaken without permits and require removal of all illegal structures and fill.	Ordinance 007-2002 LDR Sec. 9.5-345 General Environmental Design Criteria) includes LDR language that no "after the fact" permits will be issued that violate Monroe County dredge and filling regulations. The Ordinance call for removal and mitigation of all damages caused by filling.	Yes.	No amendments necessary.
Policy 204.2.9 Develop schedule of monetary penalties for dredge and fill violations.	The County has established penalties for fill violations.	Yes.	No amendments necessary.
Policy 204.2.10 Adopt LDR's to include additional regulations to protect wetlands upon completion of ADID Program.	Ordinance 007-2002 LDR Sec. 9.5-345 General Environmental Design Criteria) includes LDR language to further protect wetlands.	Yes.	No amendments necessary.
Objective 204.3 Initiate program to restore disturbed wetlands.	The completion of the LAMP will establish an implementation strategy for restoring wetlands.	Yes.	No amendments necessary.
Policy 204.3.1 Assign responsibility for wetlands restoration program to the Department of Environmental Resources and the Department of Marine Resources.	The Growth Management Division is responsible for wetlands restoration program.	Yes.	Amend policy to clarify responsibility for wetlands restoration to the Growth Management Division.
Policy 204.3.2 Draft and annually update list of publicly-owned priority wetland mitigation sites.	The completion of the LAMP will provide for an annual update on list of priority wetland mitigation sites.	Yes.	No amendments necessary.
Policy 204.3.3 Determine funding sources to support wetlands restoration program.	The completion of the LAMP will identify funding sources and programs for wetlands restoration.	Yes.	No amendments necessary.
Policy 204.3.4 Establish wetlands restoration fund.	The County uses the ACOE when a developer is required to contribute funds for wetlands restoration.	Yes.	No amendments necessary.
Policy 204.3.5 Increase enforcement of existing regulations pertaining to illegal dumping.	Various agencies in the County have authority to enforce regulations pertaining to illegal dumping.	Yes.	No amendments necessary.
Policy 204.3.6 Increase enforcement of existing regulations pertaining to illegal use of off-road and all terrain vehicles.	This has not been a problem in the Keys section of the County. In the mainland portion of the County the National Park Service	Yes.	No amendments necessary.



	enforces regulations related to illegal use of off-road and all terrain vehicles.		
Objective 204.4 Establish program for acquisition of high quality undisturbed salt marsh and buttonwood wetlands.	Monroe County currently works with state and federal agencies to acquire high quality undisturbed salt marsh and buttonwood wetlands.	Yes.	Amendments to implement the Tier System including the completion of the LAMP will establish a priority list and a funding strategy for acquiring sensitive lands.
Policy 204.4.1 Implement wetlands acquisition program through the Monroe County Natural Heritage and Park Program.	Monroe County currently works with state and federal agencies to acquire high quality undisturbed salt marsh and buttonwood wetlands.	Yes.	The Monroe County Natural Heritage and Park Program will be replaced by the Land Acquisition Master Plan.
Policy 204.4.2 Prepare and annually update list of priority wetlands acquisition sites.	Monroe County currently works with state and federal agencies to acquire high quality undisturbed salt marsh and buttonwood wetlands.	Yes.	The Land Acquisition Master Plan will provide a priority list for land acquisition.
Objective 205.1 Develop upland vegetation data base.	GIS layer exists from FMRI and ADID.	Yes.	No amendments necessary.
Policy 205.1.1 Establish a field method for mapping and evaluating upland habitats.	The Tier System classifies upland habitats based on environmental sensitivity. The Tier System further requires a vegetative survey to assist in evaluating land for development impacts.	Yes.	No amendments necessary.
Policy 205.1.2 Complete groundtruthing, mapping and preliminary habitat evaluations for upland habitats.	This is a continuing activity due to new vegetative growth.	Yes.	No amendments necessary.
Policy 205.1.3 Enter groundtruthed upland habitat location and evaluation data into the GIS.	This is an on-going activity.	Yes.	No amendments necessary.
Policy 205.1.4 Plot revised county upland vegetation maps using GIS.	This is an on-going activity.	Yes.	No amendments necessary.
Policy 205.1.5 Complete annual updates of upland vegetation database using HEI and permit data.	This is an on-going activity. However, the HEI will be replaced by the Tier System which provides a systemwide evaluation of a parcel.	Yes.	No amendments necessary.



Policy 205.1.6 Coordinate upland habitat mapping and evaluation efforts with state and federal agencies.	The County regularly coordinates with state and federal agencies to discuss the maintenance and creation of new GIS database.	Yes.	No amendments necessary.
Objective 205.2 Adopt LDR's which further protect and provide for restoration of upland habitats.	The Tier System will designate development rules based on the environmental sensitivity of lands.	Yes.	Amendments proposed. Proposed amendments to the Comp. Plan and the LDRs will implement the Tier System, which will limit clearing of Tier I lands to 10%.
Policy 205.2.1 Implement revised Habitat Evaluation Index procedures to better protect high quality upland vegetation.	The HEI will be replaced by the Tier System which will provide protection for high quality upland vegetation on a systemwide basis.	Yes.	Delete policy.
Policy 205.2.2 In developing Permit Allocation and Point Systems, consider assigning a negative point to developments proposing to disturb native upland habitat.	Under the current ROGO system development on native upland habitat receive negative points. The adoption of the Tier System will create a zoning overlay district which will establish amount of clearing permitted based on environmental sensitivity. Under this new system, lands in Tier I areas will be limited to 10% clearing, Tier II 40%, while Tier III will be limited to 60%.	Yes.	No amendments necessary.
Policy 205.2.3 Revise clustering requirements.	Ordinance 007-2002 LDR Sec. 9.5-345 General Environmental Design Criteria) includes LDR language to require clustering of development and minimize the impact of fragmentation of habitat. The adoption of the Tier System will create a zoning overlay district which will establish amount of clearing permitted based on environmental sensitivity. Under this new system, lands in Tier I areas will be limited to 10% clearing, Tier II 40%, while Tier III will be limited to 60%.	Yes.	No amendments necessary.
Policy 205.2.4 Revise bulk regulations and development standards to allow greater	Ordinance 007-2002 LDR Sec. 9.5-345 General Environmental Design Criteria) includes LDR language to allow greater	Yes.	No amendments necessary.



flexibility for clustering.	flexibility in clustering.		
<p>Policy 205.2.5 Require EIA for major developments to identify measures to mitigate impacts on native upland vegetation.</p> <p>Require implementation of identified measures as conditions of issuance of certificates of occupancy.</p>	<p>The Tier System will designate development rules based on the environmental sensitivity of lands. The adoption of the Tier System will create a zoning overlay district which will establish amount of clearing permitted based on environmental sensitivity. Under this new system, lands in Tier I areas will be limited to 10% clearing, Tier II 40%, while Tier III will be limited to 60%.</p>	Yes.	No amendments necessary.
<p>Policy 205.2.6 Retain open space requirements for upland habitats.</p>	<p>Ordinance 007-2002 LDR Sec. 9.5-345 General Environmental Design Criteria) includes LDR language requiring open space requirements for upland habitats. The adoption of the Tier System will create a zoning overlay district which will establish amount of clearing permitted based on environmental sensitivity. Under this new system, lands in Tier I areas will be limited to 10% clearing, Tier II 40%, while Tier III will be limited to 60%.</p>	Yes.	No amendments necessary.
<p>Policy 205.2.7 Establish disturbance and clearing limits for development sites.</p>	<p>Ordinance 007-2002 LDR Sec. 9.5-345 General Environmental Design Criteria) includes language establishing disturbance and clearing limits for development sites. The adoption of the Tier System will create a zoning overlay district which will establish amount of clearing permitted based on environmental sensitivity. Under this new system, lands in Tier I areas will be limited to 10% clearing, Tier II 40%, while Tier III will be limited to 60%.</p>	Yes.	No amendments necessary.
<p>Policy 205.2.8 Prohibit disturbances to champion trees, specimen trees, and federally-designated plant species.</p>	<p>Ordinance 007-2002 LDR Sec. 9.5-345 General Environmental Design Criteria) includes language protecting and preserving all champion and specimen trees in their natural condition.</p>	Yes.	No amendments necessary.



Policy 205.2.9 Minimize impacts of development on state-designated plant species, locally rare native plants, and mature native trees.	Ordinance 007-2002 LDR Sec. 9.5-345 General Environmental Design Criteria) includes LDR language protection impacts of development on state designated plant species, locally rare native plants, and mature native trees.	Yes.	No amendments necessary.
Policy 205.2.10 Require removal of invasive exotic vegetation from the development site.	Ordinance 007-2002 LDR Sec. 9.5-345 General Environmental Design Criteria) includes LDR language that required removal of all invasive exotic plant species from parcels proposed for development	Yes.	No amendments necessary.
Policy 205.2.11 Prepare list of invasive exotic upland plants.	The Growth Management Division has a list of invasive exotic upland plants from the Florida Keys Invasive Exotics Task Force.	Yes.	No amendments necessary.
Policy 205.2.12 Apply environmental regulations according to legal conditions of land as depicted on the "Dec. 1985 Habitat Classification Aerial Photographs".	LDR Section 9.5-336 designates the "1985 Habitat Classification Aerial Photographs" as the base map for establishing environmental conditions of lands. The Tier System maps supplement however, this map does not account for new growth and will therefore.	Yes.	No amendments necessary.
Objective 205.3 Implement expanded program to protect plant species designated by the state and federal governments as threatened or endangered.	The County as an on-going activity implements programs to protect plant species. The Tier System is an example of proposed new regulations that will further protect endangered habitat.	Yes.	No amendments necessary.
Policy 205.3.1 Develop list of locally rare plant species.	The Growth Management Division has a list of locally rare plant species included as part of the Habitat Evaluation Index Manual.	Yes.	No amendments necessary.
Policy 205.3.2 Expand and update mapped data base of designated plant species and locally rare plant species.	Habitat maps exist that need to be updated to include database of designated plant species.	No.	No amendments necessary.
Policy 205.3.3 Participate in Florida Champion Tree Program.	The County participates in the Florida Champion Tree Program.	Yes.	No amendments necessary.
Policy 205.3.4 Work cooperatively with federal agencies to promote recovery of federally-designated plant species.	The County continuously coordinate with federal agencies to promote recovery of federally-designated plant species.	Yes.	No amendments necessary.



Objective 205.4 Coordinate with state and federal agencies regarding land management problems in the region which may affect unique vegetative communities on mainland Monroe County.	Under Policy 102.6.1, Monroe County incorporates by reference the existing management plans for Everglades National Park and Big Cypress National Preserve. Monroe County staff continues to participate and play an active role in various planning efforts on mainland Monroe County such as the Everglades Restoration Plan.	Yes.	No amendments necessary.
Objective 205.5 Establish program for acquisition of undisturbed native upland habitat.	Monroe County coordinates with state and federal agencies to acquire environmentally sensitive properties. The adoption of the Tier System will create the priority for acquiring lands. Under this new system, lands in Tier I areas will be first priority, followed by Tier II and Tier III. As part of the Tier system, the County in concert with other agencies will establish the land acquisition program through the LAMP.	Yes.	No amendments necessary.
Policy 205.5.1 Implement native upland habitat acquisition program through the Monroe County Natural Heritage and Park Program.	Monroe County coordinates with state and federal agencies to acquire environmentally sensitive properties. The adoption of the Tier System will create the priority for acquiring lands. Under this new system, lands in Tier I areas will be first priority, followed by Tier II and Tier III. As part of the Tier system, the County in concert with other agencies will establish the land acquisition program through the LAMP. The LAMP will replace the Monroe County Natural Heritage and Park Program.	Yes.	No amendments necessary.
Policy 205.5.2 Prepare and annually update list of priority native upland habitat acquisition sites.	The completion of the LAMP will provide an updated list of priority native upland acquisition sites.	No.	No amendments necessary.
Objective 205.6 Initiate program to restore disturbed native upland habitat areas.	The completion of the LAMP will implement a program for restoring native upland habitat areas.	No.	No amendments necessary.
Objective 206.1 Adopt LDR's pertaining to	Ordinance 007-2002 (LDR Sec. 9.5-345 General Environmental Design Criteria)	Yes.	No amendments necessary.



beach/berm areas.	includes new language to protect beach/berm areas		
Policy 206.1.1 In developing Permit Allocation and Point Systems, consider assigning a negative point to developments proposed in undisturbed beach/berm areas.	The adoption of the ROGO system gives negative points for development in beach/berm areas.	Yes.	No amendments necessary.
Policy 206.1.2 Revise coastal construction setbacks for beach berm protection.	Ordinance 007-2002 (LDR Sec. 9.5-345 General Environmental Design Criteria) includes language establishing a coastal impact zone and requires construction barriers at the outer edge of the construction impact zone to prohibit disturbance outside of the coastal impact zone.	Yes.	No amendments necessary.
Policy 206.1.3 Establish limits for permitted uses, access structures, and all structures within the shoreline setback along natural shorelines for beach berm protection.	Section 9.5-349 limits combined areas of all structures to no more than 30 percent of shoreline setback, furthermore, no enclosed structures other than a dock box of five (5) feet or less in height, shall be allowed within the shoreline setback.	Yes.	No amendments necessary.
Policy 206.1.4 Prohibit fill or excavation in beach/berms.	Ordinance 007-2002 (LDR Sec. 9.5-345 General Environmental Design Criteria) includes LDR language that prohibits excavation or filling on a beach berm.	Yes.	No amendments necessary.
Policy 206.1.5 Establish disturbance and clearing limits for development sites for beach berm protection.	Ordinance 007-2002 (LDR Sec. 9.5-345 General Environmental Design Criteria) includes LDR language that limits clearing to minimum area required to allow development of a permitted use.	Yes.	No amendments necessary.
Policy 206.1.6 Establish restoration requirements following construction disturbances for beach berm protection.	Ordinance 007-2002 (LDR Sec. 9.5-345 General Environmental Design Criteria) includes LDR language that requires immediate restoration of beach berm areas disturbed during construction.	Yes.	No amendments necessary.
Policy 206.1.7 Require removal of invasive exotic vegetation from the development site for beach berm protection.	Ordinance 007-2002 (LDR Sec. 9.5-345 General Environmental Design Criteria) includes language requiring removal of all invasive exotic plant species from parcels	Yes.	No amendments necessary.



	proposed for development.		
Policy 206.1.8 Prepare list of invasive beach/berm plants	The Growth Management Division has a list of invasive exotic upland plants from the Florida Keys Invasive Exotics Task Force.	Yes.	No amendments necessary.
Policy 206.1.9 Restrict and/or prohibit existing and new outdoor lighting on beach/berms.	LDR Section 9.5-391 requires all outdoor lighting to conform to regulations on Sea Turtle Protection.	Yes.	No amendments necessary.
Policy 206.1.10 Prohibit seawalls on beaches and open water shorelines.	LDR Section 9.5-349 prohibits seawalls, bulkheads, or other hardened vertical structures on open water.	Yes.	No amendments necessary.
Objective 206.2 Initiate program to restore disturbed beach/berm areas.	The completion of the LAMP will initiate programs for the restoration of beach/berm areas.	No.	No amendments necessary.
Objective 206.3 Prepare annual beach management plans for county-owned beaches.	The completion of the LAMP will include management plans for public beaches.	No.	No amendments necessary.
Objective 206.4 Establish program for acquisition of undisturbed beach/berm habitat.	As part of on-going activities Monroe County in coordination with state and federal agencies continually acquire environmentally sensitive lands. The completion of the LAMP will establish priorities, and identify funding sources for the acquisition of environmentally sensitive lands.	Yes.	No amendments necessary.
Policy 206.4.1 Implement undisturbed beach/berm acquisition program through the Monroe County Natural Heritage and Park Program.	As part of on-going activities Monroe County in coordination with state and federal agencies continually acquire environmentally sensitive lands. The completion of the LAMP will establish priorities, and identify funding sources for the acquisition of environmentally sensitive lands. The LAMP will replace the Natural Heritage and Park Program.	Yes.	No amendments necessary.
Policy 206.4.2 Prepare and annually update list of priority undisturbed beach/berm acquisition sites.	The completion of the LAMP will provide an annually updated priority list for acquisition of beach/berm properties.	No.	No amendments necessary.
Objective 207.1 Adopt LDR's to protect and conserve wildlife.	The LDRs include the ROGO system which allocates negative points for development in critical habitat of endangered wildlife. The	Yes.	No amendments necessary.



	LDRs also sets open space requirements for environmentally sensitive parcels.		
Policy 207.1.1 Require EIA for major developments to include a wildlife survey and to identify measures to mitigate impacts on native upland vegetation.	Under the proposed Tier System, lands will be categorized based on environmental conditions of the subject property. The level of development to be permitted will then be based on its Tier category.	No.	No amendments necessary.
Policy 207.1.2 Implement revised Habitat Evaluation Index procedures to better reflect wildlife habitat value.	The Habitat Evaluation Index (HEI) adds points for habitat presumed to provide refuge for listed animal species. However, the HEI is found to be flawed since it does not always completely reflect the role of a parcel within an overall system. Therefore, the Tier System has been developed to look at lands on a systemwide basis.	Yes.	No amendments necessary.
Policy 207.1.3 Prohibit development on offshore islands which are bird rookeries.	The ROGO system allocates major negative points for proposed development on offshore islands.	Yes.	No amendments necessary.
Policy 207.1.4 Require 100 percent open space for all undisturbed salt marsh and buttonwood wetlands.	The current LDRs (Sec. 9.5-347) requires saltmarsh and buttonwood wetlands have 100 percent open space requirements	Yes.	No amendment necessary.
Policy 207.1.5 Revise clustering requirements to reduce habitat fragmentation	Ordinance 007-2002 LDR Sec. 9.5-345 General Environmental Design Criteria) includes LDR language to preserve habitat to the maximum extent practical through the configuration of open space.	Yes.	No amendments necessary.
Objective 207.2 Provide guidance to private landowners to reduce impacts to state- and federally-designated species.	Technical Coordination Letters from the FWS are currently required by the County prior to issuing a building permit in areas with known state and federally-designated species.	Yes.	No amendments necessary.
Policy 207.2.1 Prepare management guidelines for threatened and endangered species.	Technical Coordination Letters from the FWS are currently required by the County prior to issuing a building permit in areas with known state and federally-designated species.	Yes.	No amendments necessary.
Policy 207.2.2 Make management guidelines available to general public.	Various state and federal agencies have management guidelines available to the general public.	Yes.	No amendments necessary.



Policy 207.2.3 Incorporate specific management guidelines as stipulations for land development orders.	Technical Coordination Letters from the FWS are currently required by the County prior to issuing a building permit in areas with known state and federally-designated species. Conditions in the letters are incorporated within the development orders.	Yes.	No amendments necessary.
Objective 207.7 Implement activities to promote recovery of the Key Deer	Since adoption of the Comp. Plan, the HCP and LCP have been completed for Big Pine and No Name Key, furthermore, the County continues to collaborate with state and federal agencies in land acquisition on Big Pine and No Name Keys.	Yes.	Amendments to implement findings of the HCP and LCP will be written.
Policy 207.7.1 Regulate development on Big Pine Key so as to protect Key deer, preserve the habitat of Key deer, and maintain character of Big Pine Key.	The HCP and LCP have been completed for Big Pine and No Name Keys. The adoption and implementation of the Tier System will establish areas such as Key deer habitat as Tier I and therefore a priority for acquisition.	Yes.	No amendments necessary.
Policy 207.7.3 Implement Key deer habitat acquisition program through the Monroe County Natural Heritage and Park Program.	The LAMP will prioritize and provide management plans for lands acquired as environmentally sensitive habitat. The LAMP will replace the Natural Heritage and Park Program.	Yes.	No amendments necessary.
Policy 207.7.4 Support state and federal acquisition programs to protect Key deer habitat.	The county coordinates with FWS and DEP in trying to complete the Coupon Bight/Key Deer project through Florida Forever land acquisition program. Completion of the LAMP will prioritize and provide management plans for lands acquired as environmentally sensitive habitat.	Yes.	No amendments necessary.
Policy 207.7.5 Identify freshwater lens systems and recharge areas. Implement measures to protect quantity and quality of groundwater recharge to freshwater lenses	Complete.	Yes.	No amendments necessary.
Policy 207.7.6 Monitor FKAA activities within	The County regularly coordinates with FKAA on all activities within designated Key Deer	Yes.	No amendments necessary.



designated Key deer habitat.	habitat.		
Policy 207.7.7 Discourage tour groups on Big Pine Key	The completion of the LCP and HCP establishes a vision for development on Big Pine Key without significant impact to the Key Deer and its habitat.	Yes.	Policy to be deleted. The Big Pine/No Name Key LCP as an action item discourages tour buses from the planning area.
Policy 207.7.8 Designate Key deer habitat areas as priority areas for enforcement of animal control laws.	The LCP identifies enforcement of animal control laws as an action item.	Yes.	No amendments necessary.
Policy 207.7.9 Incorporate specific management guidelines to protect Key deer and Key deer habitat as stipulations for land development orders.	The LCP and HCP specifies management guidelines to protect Key Deer and Key Deer habitats as stipulations for land development orders. LCP will be adopted as part of the Comprehensive Plan.	Yes.	The LCP will be adopted as part of the Comprehensive Plan.
Policy 207.7.10 Adopt LDR's limiting fencing on Big Pine Key.	Section 95-309(c) of the LDRs regulates fencing on Big Pine and No Name Keys.	Yes.	No amendments necessary.
Policy 207.7.11 Develop and implement roadside management techniques to reduce Key deer roadway mortality.	Monroe County Public Works has a policy to keep vegetation at the roadsides mowed real short to discourage feeding by Key Deer along the roadways.	Yes.	No amendments necessary.
Policy 207.7.12 Support USFWS enforcement of Key deer no feeding laws on Big Pine Key.	Monroe County supports USFWS enforcement of Key Deer no feeding laws.	Yes.	No amendments necessary.
Policy 207.7.13 Strictly enforce speed limits within Key deer habitat.	Law enforcement agencies strictly enforce speed limits within Key Deer habitat.	Yes.	No amendments necessary.
Policy 207.7.14 Implement program for voluntary removal of invasive plants from private property.	Permits for development require removal of invasive plants from private property.	Yes.	No amendments necessary.
Policy 207.7.15 Distribute Key deer management guidelines to homeowners on Big Pine Key	The USFWS distributes management guidelines to homeowners.	Yes.	No amendments necessary.
Policy 207.7.16 Meet routinely with USFWS to review need for additional recovery measures.	The County routinely coordinates with USFWS to review need for additional recovery measures.	Yes.	No amendments necessary.



Policy 207.7.17 Coordinate with USFWS and FGFWFC to develop criteria to determine roadway management techniques to reduce vehicular deer collisions.	Done.	Yes.	No amendments necessary.
Objective 207.8 Implement activities to promote recovery of the Florida manatee, American crocodile, and marine turtles.	The County requires Technical Coordination Letter for USFWS prior to issuing permits in habitat that affect endangered and threatened species. The County has also amended the LDRs to strengthen protection of habitat. The County also regularly acquires property for habitat protection.	Yes.	No amendments necessary.
Policy 207.8.1 Adopt LDR's pertaining to beach/berms.	Ordinance 007-2002 (LDR Sec. 9.5-345 General Environmental Design Criteria) includes new language to protect beach/berm areas	Yes.	No amendments necessary.
Policy 207.8.2 Initiate program to restore and maintain disturbed beach/berm areas on public lands.	With the completion of the LAMP a management and restoration plan for public lands will be initiated.	Yes.	No amendments necessary.
Policy 207.8.3 Develop and implement a boating impacts management program which considers protection of marine turtles and manatees	The County has a channel marking program to reduce boating impacts on marine turtles and manatees.	Yes.	No amendments necessary.
Policy 207.8.4 Adopt LDR's which reduce pollutant discharges from dredge and fill activities.	Ordinance 007-2002 (LDR Sec. 9.5-345 General Environmental Design Criteria) includes language to regulate fill activities.	Yes.	No amendments necessary.
Policy 207.8.5 Support establishment of an oil spill response team in the Keys.	DEP has established an oil spill response team in the Keys.	Yes.	No amendments necessary.
Policy 207.8.6 Adopt a turtle protection ordinance pertaining to existing and new development on beach/berms which protect marine turtles from human disturbance.	Ordinance 007-2002 (LDR Sec. 9.5-345 General Environmental Design Criteria) includes language to regulate development activities near marine turtle habitat.	Yes.	No amendments necessary.
Policy 207.8.7 Adopt LDR's pertaining to siting of new development and construction in the	Ordinance 007-2002 LDR Sec. 9.5-345 General Environmental Design Criteria) includes LDR language that prohibits	Yes.	No amendment necessary.



vicinity of turtle nesting beaches.	development other than pile supported docks and walkways within fifty feet of any portion of any beach berm complex known to be a potential nesting area for marine turtles.		
Policy 207.8.8 Monroe County shall support and assist the conservation efforts of Save A Turtle, Inc	Monroe County supports conservation efforts to protect marine turtles.	Yes.	Amend language to support and assist all non-profit groups.
Policy 207.8.9 Train selected county staff to handle marine turtles.	Monroe County encourages staff to get involved with conservation activities.	Yes.	No amendments necessary.
Policy 207.8.10 Implement turtle nesting beach acquisition program through the Monroe County Natural Heritage and Park Program.	The LAMP will replace the Natural Heritage and Park Program for prioritizing land acquisition for habitat protection.	Yes.	No amendments necessary.
Policy 207.8.11 Consider adoption of speed controls in nearshore waters and/or creation of a boating protection zone.	County has a channel marking program and has created numerous zones for speed controls.	Yes.	No amendments necessary.
Objective 207.9 Protect nesting and resting sites of bird populations.	The County requires Technical Coordination Letter for USFWS prior to issuing permits in habitat that affect endangered and threatened species. The County has also amended the LDRs to strengthen protection of habitat. The County also regularly acquires property for habitat protection.	Yes.	No amendments necessary.
Policy 207.9.1 Compile list of offshore island bird rookeries.	Not completed. The County will work with state and federal agencies to identify offshore island bird rookeries and incorporate these into a GIS layer.	No.	No amendments necessary.
Policy 207.9.2 Compile list of nesting sites for federally-designated bird species.	Not completed. The County will work with state and federal agencies to identify offshore island bird rookeries and incorporate these into a GIS layer.	No.	No amendments necessary.
Policy 207.9.3 Prepare management guidelines for landowners in the vicinity of nesting sites used by federally-designated bird species.	USFWS is the most appropriate agency to implement this policy.	No.	Delete policy.
Policy 207.9.4 Retain LDR's which limit land	Current ROGO allocation system awards	Yes.	No amendments necessary.



uses and establish habitat protection measures for wintering grounds of piping plover on Ohio Key.	negative points for development in nesting or resting area for piping plover.		
Policy 207.9.5 Adopt LDR's which prohibit new campsite development until December 31, 2001, including campsites on Ohio Key.	The Piping Plover habitat on the southside of Ohio Key has been acquired by USFWS.	Yes.	Delete policy.
Policy 207.9.6 Support FWS with planned acquisition of piping plover wintering grounds on Ohio Key.	USFWS has acquired the subject property.	Yes.	Delete policy.
Policy 207.9.7 Implement federally-designated bird species nesting site and wintering ground acquisition program through the Monroe County Natural Heritage and Park Program.	Under the LAMP habitat for designated species will be listed as priority acquisition sites.	Yes.	No amendments necessary.
Objective 207.10 Implement activities to promote recovery of Schaus' swallowtail butterfly.	The County requires Technical Coordination Letter for USFWS prior to issuing permits in habitat that affect endangered and threatened species. The County has also amended the LDRs to strengthen protection of habitat. The County also regularly acquires property for habitat protection.	Yes.	No amendments necessary.
Policy 207.10.1 Identify native upland habitats of Schaus' swallowtail butterfly not protected in public ownership.	The LAMP will identify known habitat for protected animals and list these lands as priority acquisition sites.	Yes.	No amendments necessary.
Policy 207.10.2 Implement Schaus' swallowtail butterfly habitat acquisition program through the Monroe County Natural Heritage and Park Program.	The LAMP will replace the Natural Heritage and Park Program. The LAMP will identify known habitat for protected animals and list these lands as priority acquisition sites.	Yes.	No amendments necessary.
Policy 207.10.3 In developing Permit Allocation and Point Systems, consider assigning a negative point to developments proposed within unprotected hammocks used as habitat by the Schaus' swallowtail butterfly.	Under the current ROGO point allocation system, development in known habitat of a documented threatened/endangered species receives negative points.	Yes.	No amendments necessary.
Policy 207.10.4 Coordinate with Mosquito	Various state and federal agencies communicate with Mosquito Control district to	Yes.	No amendments necessary.



Control District regarding avoidance of spraying in Schaus' swallowtail butterfly habitat.	avoid impacts to the Schaus' swallowtail butterfly habitat.		
Policy 207.10.5 Revise LDR's through HEI's to better protect high quality upland vegetative communities and threatened and endangered species.	The Habitat Evaluation Index (HEI) adds points for habitat presumed to provide refuge for listed animal species. However, the HEI is found to be flawed since it does not always completely reflect the role of a parcel within an overall system. Therefore, the Tier System has been developed to look at lands on a systemwide basis.	Yes.	Policy to be deleted. The implementation of the Tier System will eliminate the need for HEIs. However, elimination of the HEI does not preclude on-site vegetative analysis.
Policy 207.10.6 Promote research and development of alternatives to aerial applications of insecticide for mosquito control.	Mosquito Control continues to look for more efficient and less environmentally intrusive ways to conduct mosquito control.	Yes.	No amendments necessary.
Policy 207.10.7 Encourage revegetation using torchwood on restoration sites on North Key Largo. Require tree donations for replacement on North Key Largo to include torchwood.	Torchwood is encouraged for restoration sites.	Yes.	No amendments necessary.
Policy 207.10.8 Monitor FCAA activities within designated Schaus' swallowtail butterfly habitat.	The County and FCAA continuously coordinate activities in known habitat for endangered/threatened species.	Yes.	No amendments necessary.
Objective 207.11 Implement activities to promote recovery of the Stock Island tree snail	The County requires Technical Coordination Letter for USFWS prior to issuing permits in habitat that affect endangered and threatened species. The County has also amended the LDRs to strengthen protection of habitat. The County also regularly acquires property for habitat protection.	Yes.	No amendments necessary.
Policy 207.11.1 Provide periodic population counts for Stock Island tree snail to FWS.	FWS is the appropriate agency to conduct population counts for Stock Island Tree Snail.	No.	Delete policy.
Policy 207.11.2 Coordinate with Monroe County Mosquito Control District to direct insecticide spraying away from critical habitat	The County and various State and Federal agencies coordinate with the Mosquito Control District to reduce impacts of mosquito	Yes.	No amendments necessary.



of the Stock Island tree snail.	spraying on endangered/threatened species.		
Policy 207.11.3 Provide assistance to state and federal agencies with locating potential introduction sites for the Stock Island tree snail.	The County continuously coordinate with state and federal agencies on programs to protect endangered/threatened species.	Yes.	No amendments necessary.
Policy 207.11.4 Implement introduction site acquisition program through the Monroe County Natural Heritage and Park Program.	The LAMP will replace the Natural Heritage and Park Program. The LAMP will identify known habitat for protected animals and list these lands as priority acquisition sites.	Yes.	Amendment to replace the Natural Heritage and Park program with the LAMP.
Objective 207.12 Implement activities to promote recovery of the eastern indigo snake, Key Largo wood rat, silver rice rat, Key Largo cotton mouse and the Lower Keys marsh rabbit.	The County requires Technical Coordination Letter for USFWS prior to issuing permits in habitat that affect endangered and threatened species. The County has also amended the LDRs to strengthen protection of habitat. The County also regularly acquires property for habitat protection.	Yes.	No amendments necessary.
Policy 207.12.1 Identify documented wetland and native upland habitats of the eastern indigo snake, Key Largo wood rat, silver rice rat, Key Largo cotton mouse and the Lower Keys marsh rabbit.	GIS layer exists identifying habitats of the eastern indigo snake, Key Largo wood rat, silver rice rat, Key Largo cotton mouse and the Lower Keys marsh rabbit.	Yes.	No amendments necessary.
Policy 207.12.2 Implement habitat acquisition program through the Monroe County Natural Heritage and Park Program	The LAMP will replace the Natural Heritage and Park Program. The LAMP will identify known habitat for protected animals and list these lands as priority acquisition sites.	Yes.	Amendment to replace the Natural Heritage and Park program with the LAMP.
Policy 207.12.3 In developing Permit Allocation and Point Systems, consider assigning a negative point to developments proposed within documented habitats of the eastern indigo snake, Key Largo wood rat, Key Largo cotton mouse and the Lower Keys marsh rabbit.	Under the current ROGO point allocation system, development in known habitat of a documented threatened/endangered species receives negative points.	Yes.	No amendments necessary.
Policy 207.12.4 Identify and implement measures to protect the eastern indigo snake from illegal collection.	DEP and FWC enforce programs to protect collection of endangered/threatened species.	Yes.	No amendments necessary.



Policy 207.12.5 Require 100 percent open space for all undisturbed salt marsh and buttonwood wetlands	Ordinance 007-2002 LDR Sec. 9.5-345 General Environmental Design Criteria) includes LDR language that requires 100 percent open space for all saltmarsh and buttonwood wetlands.	Yes.	No amendments necessary.
Policy 207.12.6 Implement revised Habitat Evaluation Index procedures to better protect high quality upland vegetation.	The Habitat Evaluation Index (HEI) adds points for habitat presumed to provide refuge for listed animal species. However, the HEI is found to be flawed since it does not always completely reflect the role of a parcel within an overall system. Therefore, the Tier System has been developed to look at lands on a systemwide basis.	Yes.	Policy to be deleted. The implementation of the Tier System will eliminate the need for HEIs. However, elimination of the HEI does not preclude on-site vegetative analysis.
Policy 207.12.7 Monitor FCAA activities within designated habitat of the eastern indigo snake, Key Largo wood rat, Key Largo cotton mouse and the Eastern indigo snake.	The County and FCAA continuously coordinate activities in known habitat for endangered/threatened species.	Yes.	No amendments necessary.
Policy 207.12.8 Coordinate with USFWS and FGFWFC to identify additional measures which could be undertaken by Monroe County to promote recovery of the eastern indigo snake, Key Largo wood rat and the Key Largo cotton mouse.	The County continuously coordinates with USFWS and the FGFWFC (now the Florida Fish and Wildlife Conservation Commission) on programs to protect and promote recovery of endangered/threatened species.	Yes.	No amendments necessary.
Objective 207.13 Implement activities to promote recovery of the American alligator.	The County requires Technical Coordination Letter for USFWS prior to issuing permits in habitat that affect endangered and threatened species. The County has also amended the LDRs to strengthen protection of habitat. The County also regularly acquires property for habitat protection.	Yes.	No amendments necessary.
Policy 207.13.1 Adopt LDR's which continue to require 100 percent open space in freshwater wetlands.	Ordinance 007-2002 LDR Sec. 9.5-345 General Environmental Design Criteria) includes LDR language requiring 100 percent open space in freshwater wetlands.	Yes.	No amendments necessary.
Policy 207.13.2 Support acquisition of freshwater wetlands on Big Pine Key by	The County coordinates with various state and federal agencies in land acquisition.	Yes.	No amendments necessary.



SFWMD, USFWS and DEP.			
Policy 207.13.3 Identify freshwater wetlands which provide important alligator habitat which are not within the SFWMD acquisition program project limits. Implement habitat acquisition program through the Monroe County Natural Heritage and Park Program.	The County continues to identify wetlands for possible acquisition. The LAMP will replace the Natural Heritage and Park Program for identifying priority acquisition sites.	Yes.	No amendments necessary.
Policy 207.13.4 Identify freshwater lens systems and recharge areas. Implement measures to protect quantity and quality of groundwater recharge to freshwater lenses.	The identification of freshwater lens systems and recharge areas is complete.	Yes.	No amendments necessary.
Objective 1301.6 Establish or maintain mechanisms of coordination and cooperation to ensure the protection and restoration of wetlands.	The County continuously coordinates with state and federal agencies to protect and restore wetlands.	Yes.	No amendments necessary.
Policy 1301.6.1 Participate in the Florida Keys Advance Identification of Wetlands (ADID) Program.	The County participated in the ADID Program.	Yes.	No amendments necessary.
Policy 1301.6.2 As part of the ADID Program, continue to cooperate with the EPA, the ACOE, the FGFWFC, and the USFWS to develop a wetlands functional assessment protocol.	The County participated in the development of the KEYWEP.	Yes.	No amendments necessary.
Policy 1301.6.3 As part of the ADID Program, Monroe County, EPA, FWS, and FGFWFC will jointly carry out the functional analysis of wetlands.	The County participated in the development of the KEYWEP.	Yes.	No amendments necessary.
Policy 1301.6.4 Work cooperatively with the ACOE, EPA, DER, DNR, FGFWFC, and others	The County regularly coordinates with various state and federal agencies to determine funding sources for wetlands restoration.	Yes.	No amendments necessary.



as appropriate, to determine funding sources to support the wetlands restoration program			
Policy 1301.6.5 Cooperate with the FGFWFC in its effort to map freshwater wetlands and disturbed wetlands.	This task has been completed in coordination with DEP.	Yes.	No amendments necessary.
Policy 1301.6.6 Environmental Resources, in consultation with Marine Resources, shall work cooperatively with the Land Authority in developing and administering the wetlands acquisition program.	The Growth Management Division has a Land Steward who works on developing and administering the wetlands acquisition program.	Yes.	Amend policy to clarify responsibility for wetlands restoration to the Growth Management Division.
Objective 1301.7 Implement mechanisms to identify and resolve intergovernmental coordination needs pertaining to environmental issues and natural resource protection.	The County regularly coordinates with state and federal agencies regarding environmental and natural resource protection issues.	Yes.	No amendments necessary.
Policy 1301.7.1 Initiate an interlocal agreement with FWS and SFWMD to identify and map on GIS the freshwater lenses of the Florida Keys, their associated recharge areas and an analysis of the condition of the lenses.	The County coordinated with various state and federal agencies to complete mapping and an evaluation of wetlands.	Yes.	No amendments necessary.
Policy 1301.7.2 Coordinate with applicable state agencies to promote utilization of grey water storage systems and utilization for all exterior irrigation and flushing purposes.	The County will coordinate with FKAA and various state and federal agencies to analyze use of grey water storage.	Yes.	No amendments necessary.
Policy 1301.7.4 Coordinate upland habitat mapping and evaluation efforts with the EPA, ACOE, DNR, SFWMD, FGFWFC, and the National Audubon Society.	Monroe County regularly coordinates with various state and federal agencies on habitat mapping and evaluation efforts.	Yes.	No amendments necessary.
Policy 1301.7.5 In cooperation with appropriate state and/or federal agencies, identify current and future land use activities causing or potentially causing adverse impacts on sensitive natural features and resources within state and federal conservation lands and	Monroe County will establish a Tier System that will categorize lands based on environmental sensitivity on a systemwide basis. The Tier System classification will determine the level of development permitted on lands.	Yes.	No amendments necessary.



develop a management plan for protection of each Conservation Land Protection Area.			
Policy 1301.7.6 Assist the DCA in developing a coordinated agency review. The Growth Management Division shall continue to conduct meetings with the DER, NOAA, DNR, and ACOE to identify the environmental issues and contradictions in rules and authorities related to the permitting process for marinas, docking facilities, piers, mooring sites, hardened vertical shoreline structures, and dredging in the Florida Keys.	Monroe County regularly coordinates with various state and federal agencies on environmental issues and regulations related to development that affect the marine environment.	Yes.	No amendments necessary.
Policy 1301.7.7 Coordinate boating impacts management activities with those of the FKNMS, DNR, USCG, and the USFWS.	The County coordinates with various state and federal agencies in developing regulations to mitigate negative boating impacts.	Yes.	No amendments necessary.
Policy 1301.7.8 Work cooperatively with the USFWS to promote the recovery of plant species designated by the federal government as threatened and endangered.	The County coordinates with USFWS to promote recovery of plant species.	Yes.	No amendments necessary.
Policy 1301.7.9 Implement an ongoing coordination program with the National Park Service, SFWMD, Dade and Collier County to address existing and potential land management problems in the region which may affect the conservation, use and protection of unique vegetative communities and species of special status on mainland Monroe County.	The County has adopted the National Parks Management Plan as part of the Comprehensive Plan. As needed the County will participate in dialogue with other local governments, state and federal agencies regarding conservation on mainland Monroe County.	Yes.	No amendments necessary.
Policy 1301.7.10 Implement species of special status identification and protection programs in coordination and cooperation with all pertinent agencies and organizations.	The County regularly coordinates with state and federal agencies on conservation and protection programs. Furthermore, the County will complete the LAMP which will create a priority list for land acquisition.	Yes.	No amendments necessary.
Policy 1301.7.11 Work cooperatively with the DER and the DNR to identify alternatives for	The County has on-going dialogue with DEP regarding abandoned mining pits in the	Yes.	No amendments necessary.



adaptive reuse and reclamation of abandoned mining pits in the Florida Keys.	Florida Keys.		
Policy 1301.7.12 Initiate discussions with the FCAA and providers of electricity and telephone service to assess the measures which could be taken to discourage or prohibit extension of facilities and services to Coastal Barrier Resource Systems (CBRS) units.	The County has written agreements with service providers to prohibit extension of facilities and services to Coastal Barrier Resource Systems (CBRS)	Yes.	No amendments necessary.
Policy 1301.7.13 Encourage and participate in the development and implementation of pollution response plans, include participation in an oil response team and plans for hazardous materials emergencies.	The Monroe County Comprehensive Emergency Management Plan has outlined tasks for the County's role in hazardous materials emergencies.	Yes.	No amendments necessary.
Policy 1301.7.14 Identify the technical assistance available from the U.S. Department of Agriculture, Soil Conservation Service for development and implementation of a soil erosion and sedimentation control program.	The County continues to monitor to identify programs available from the US Department of Agriculture, Soil Conservation Service.	Yes.	No amendments necessary.
Policy 1301.7.15 Coordinate with DNR and encourage total acquisition of North Key Largo under the CARL program.	The County has coordinated with the State on the total acquisition of North Key Largo under the CARL (now Florida Forever) program.	Yes.	No amendments necessary.
Policy 1301.7.16 Continue involvement with the ongoing Florida Keys interagency committee to solicit comments from and offer comments to DER, DNR, NOAA, SFWMD, FWS, FGFWFC, ACOE and DCA on permitting, planning, regulatory revisions, and other agency-related issues.	The County regularly coordinates with various state and federal agencies on permitting, planning, regulatory revisions, and other agency-related issues.	Yes.	No amendments necessary.



Summary

To implement the objectives and policies in the Comprehensive Plan designed to protect habitat, the following actions have been taken:

- Adopt a Point Allocation System for new building permits that favor development in established subdivisions with available infrastructure.
- Adopt a Point Allocation System for new building permits that direct growth away from environmentally sensitive areas by awarding negative points for development in habitat protection areas, areas which impact threatened or endangered animal species, critical habitat areas, coastal high hazard areas, or conservation land protection areas.
- Adopt LDRs requiring the clustering of development to avoid clearing of important habitat.
- Adopt a Tier System for classifying lands on a systemwide basis.
- In conjunction with State and Federal agencies, actively acquire land through programs such as Florida Forever.
- Adopt Ordinance 007-2002 which created stricter environmental standards for development.
- Adopt mangrove trimming ordinance.
- Adopt Ordinance that regulates fill activities.
- Adopt Ordinance that regulate development that affect seagrass.
- Completed the Big Pine/No Name Key Livable CommuniKeys Master Plan which created action items for preserving habitat on Big Pine/No Name Key and ensuring that development has minimal impact on habitat.
- Completed the Habitat Conservation Plan to establish guidelines under which development may occur on Big Pine/No Name Keys.
- Support activities to acquire important habitat for threatened and endangered species.
- Coordinate with state and federal agencies on studies and activities to protect endangered habitat.
- Build wetlands and uplands database on GIS to monitor and regulate development that affect wetlands.

Recommendation

- Adopt the ROGO Tier System, this system will classify lands on a systemwide basis.
- Adopt a ROGO Tier System that limits clearing based on environmental sensitivity.
- Complete the Land Acquisition Master Plan that will accomplish the following:
 - prioritize lands for acquisition,



- create a management system for acquired lands,
- identify suitable parcels for affordable housing,
- provide a habitat restoration plan, and
- identify funding for land acquisition.

- Complete the Livable CommuniKeys Program and adopt findings as part of the Comprehensive Plan.
- Continue to support activities to acquire important habitat for threatened and endangered species.
- Continue to coordinate with state and federal agencies on studies and activities to protect endangered habitat.
- Continue to update and build GIS database of different habitats.



**MONROE COUNTY
EVALUATION AND APPRAISAL REPORT (EAR)
ISSUE: HURRICANE EVACUATION**

Background

A guiding principle of growth management and comprehensive planning is the protection of public health, safety, and welfare. The most ominous threat to public safety in the Florida Keys is a hurricane. Due to its location, its extensive shoreline, and the threat from storm surge, flooding, and high winds associated with hurricanes, hurricane evacuation is one of the primary factors in determining how much growth the Florida Keys can accommodate.

The Comprehensive Plan has goals, objectives, and policies to address hurricane evacuation through the following strategies:

- A Permit Allocation System to limit the amount of new growth,
- Continuous update of the Hurricane Evacuation Models,
- Coordination with various agencies to maintain and improve hurricane evacuation routes, and
- Coordination and interlocal agreements to provide evacuation shelters and refuges for Monroe County residents.

Rate Of Growth Ordinance (ROGO)

In 1992 Monroe County established the Rate of Growth Ordinance (ROGO) based upon the ability to safely evacuate the Florida Keys. ROGO establishes a 24-hour clearance time during a hurricane of Category 3 or higher. Under the ROGO system, the DCA and Monroe County determined that 2550 new residential permits can be allocated while maintaining the 24-hour standard. Under this scenario Monroe County opted for a ten-year allocation period, thereby setting the initial allocation at 255 units/year over the ten-year allocation period.

When the Village of Islamorada incorporated in 1998, the amount of ROGO units allocated to Monroe County on a yearly basis was reduced by 28 units. After the incorporation of the City of Marathon in 1999, this number was further reduced by 30 units/year. These allocation figures were reduced by 20% in 1999 due to lack of substantial progress in implementing the Comprehensive Plan. The current allocation figures are shown in Table 1.2.



Table 1.2 ROGO Allocation

Jurisdiction	# of ROGO Allocations
Monroe County	158
Village of Islamorada	22
City of Marathon	24

The Florida Keys Hurricane Evacuation Study (The Miller Study)

In 2000, the Florida Department of Transportation (FDOT) hired Miller Consulting Inc. to conduct the Florida Keys Evacuation Study. This study had three specific goals:

- 1) Develop an Evacuation Model that measured and analyzed the unique characteristics of the Florida Keys;
- 2) Determine "Clearance Time" required to evacuate the Florida Keys up to Florida City, based on existing US1 and Card Sound Road conditions; and
- 3) Identify clearance times for various scenarios, including existing conditions ("no build") as well as "build" alternatives.

Three alternatives were evaluated to identify evacuation time in the Florida Keys. These alternatives are:

1. **No Build Alternative**-Under this scenario, the existing conditions of US-1 and Card Sound Road will remain the same. An evacuation will utilize the existing available outbound lanes with no expansion operationally or physically.
2. **TSM Alternative**-Transportation Systems Management (TSM) alternative involves the use of low-cost traffic engineering solutions such as reversible lanes, one-waying of Card Sound Road, one waying the 18-mile stretch, etc.
3. **Permanent Improvement Alternatives**- This option consists of higher cost improvements, but is limited to those improvements that would produce important capacity increases at key bottlenecks in the outbound direction, primarily.

The clearance times for the various alternatives are as follows:

- 1) **No Build Alternative**-For a category 3-5 hurricane, and a normal response by the local population in the Year 2000, the existing roadway system (including Card Sound Road) will provide an evacuation clearance interval of 25 hours 24



minutes. In the year 2005, clearance time increases to 25 hours, 50 minutes. Without Card Sound Road, the clearance time is projected to be 29 hours and 14 minutes in the Year 2005.

- 2) **TSM Alternative**-The TSM alternative would improve clearance time to 22 hours, 32 minutes in 2005, for a category 3-5 hurricane, assuming a "normal" response. This is exclusive of the setup and take down times associated with the TSM alternative.
- 3) **Permanent Improvement Alternative**-The "Permanent Improvement" alternative further reduces evacuation clearance time to 18 hours, 36 minutes in 2005, assuming a category 3-5 hurricane and a normal response.

In 2003 the Hurricane model was updated using the Year 2000 Census information. Based on the updated figures, the clearance time is calculated at 24 hours and 10 minutes.

The inputs for the Hurricane Evacuation Model should be updated on a regular basis to ensure that hurricane evacuation times are being correctly reflected by changes in population or housing types or any of the other variables in the model.

Coordination with various agencies to maintain and improve hurricane evacuation routes

Since the adoption of the Comprehensive Plan, Monroe County has been an active participant with the Florida Department of Transportation and the Department of Community Affairs-Division of Emergency Management in trying to identify methods of improving evacuation time in the Florida Keys.

In 1998, improvements to elevate Card Sound Road was completed. After completion of this improvement Card Sound Road was designated as a hurricane evacuation route.

It should be noted that a member of the Board of County Commissioners sat on the Project Steering Committee for the Florida Keys Hurricane Evacuation Study. As stated earlier, this study analyzed three alternatives for determining clearance times in the Florida Keys.

The "No Build" Alternative assumes that US-1 and Card Sound Road would remain as is and that emergency operating plans would utilize the existing outbound lanes with no expansion physically or operationally.



The "Transportation System Management" Alternative are strategies that could increase capacity on US-1 during evacuation periods. The study identifies five sections of roadway that may be used to increase capacity during a hurricane evacuation.

1. US-1 through Florida City from Card Sound Road to Florida's Turnpike.

This strategy would take a four-lane section of road and convert it to three lanes northbound and one land southbound. This would mean converting one southbound lane into a northbound lane.

2. 18-mile Stretch.

The TSM strategy would convert the 18-mile stretch into two northbound lanes and one southbound lanes. This would mean marking a second lane in the middle of the road to provide for a second north bound lane.

3. Reversing 18-mile stretch or Card Sound Road.

This strategy would convert either the 18-mile stretch or Card Sound Road into a one-way outbound road.

4. Mile Marker 90 to Mile Marker 106.3

This strategy would convert one of the southbound lanes into a northbound lane.

5. Mile Marker 80 to Mile Marker 90

This strategy would create two northbound lanes by using in different segments, the median turn lane, and the wide shoulders at certain locations.

6. Mile Marker 47 to 48 and Mile Marker 54.5 to 80

This strategy would create two northbound lanes and southbound lane similar to the strategy for #2.



Under all of the options discussed above, the creation of temporary capacity could reduce the need for new pavement construction as long as the set-up to add the temporary capacity can be implemented quickly.

Set-up would involve installation of traffic cones, traffic control devices, and enforcement personnel to maintain the traffic control setups. It is estimated that the set-up time would require an additional as an example the 3-laning of the 18 mile stretch 7.4 hours, 7.05 hours for Card Sound Road. 18.7 hours for the rest of the Keys. 4.7 hours if 4 crews are available.

Evaluation and Analysis of Comprehensive Plan Objectives and Policies

Objectives, Policies Summary	Current Conditions/Amendments to Policy since original adoption	Is Objective or Policy accomplished or being implemented?	Need for future Comprehensive Plan amendments.
Objective 101.2 Reduce hurricane evacuation clearance times to 24 hours by the year 2010.	Using the Year 2000 Census and the Florida Keys Hurricane Evacuation Study (Miller Study) model, the evacuation clearance time is 24 hours 10 minutes. Coordinate with FDOT, Monroe County Emergency Management, DCA, municipalities, and other agencies to implement strategies outlined in the Miller Study designed to reduce hurricane evacuation time.	No.	No amendments necessary.
Policy 101.2.1 Develop and adopt a Permit Allocation System for new residential development.	The Rate of Growth Ordinance (ROGO) system was adopted in 1992. This system was implemented with the assumption that hurricane evacuation time will be set at 24 hours. However, under the proposed Tier System, ROGO points will be allocated based on environmental value of land. In addition to continuing to implement growth controls for hurricane evacuation, the Tier System also provides a basis for future land acquisition and the location of future development.	Yes.	No amendments necessary.
Policy 101.2.2 Require applicants to obtain other permits and approvals prior to	LDR Sec. 9.5-122.1 requires an applicant for a ROGO permit to submit an approved building	Yes.	No amendments necessary.



applying for a permit for new residential development from Growth Management Division.	permit application. LDRs further state that applicant must satisfy and comply with all county, state and federal requirements prior to issuance of building permit.		
Policy 101.2.3 Specify procedures for annual adjustment of the number of permits, allocation of unit types, and timing of acceptance of applications for the Permit Allocation System.	LDR Section 9.5-122 specifies procedures for adjustment of permits, allocation of unit types, and timing of acceptance of applications for the Permit Allocation System. LDR text amendment is needed to reflect number of ROGO units available per subarea. The numbers stated in current LDRs do not reflect reduction of available ROGO allocations due to incorporation of the City of Marathon.	Yes.	No amendments necessary.
Policy 101.2.5 Initiate interlocal agreement with the Cities to resolve the discrepancy of units between the County's proposed allocation to the Cities and the Cities vested development assumptions.	The County coordinates with the existing municipalities to discuss ROGO allocation units.	Yes.	Amendments to reflect the incorporation of new municipalities.
Policy 101.2.7 Coordinate with FDOT to place 18-mile stretch capacity improvements on FDOT's 5-year work plan by 1998.	FDOT Work Plan (2004/05-2008/09) includes about \$180 million for design build projects to replace Jewfish Creek Bridge and to reconstruct US-1 from north of the bridge to Card Sound Road.	Yes.	No amendments necessary.
Policy 101.2.8 Coordinate with FDOT to identify funding and include the improvements needed between mile marker 80 and 90 in FDOT's 5-year work plan to have construction completed by 2010.	The section of US-1 between Mile Marker 80 and 90 is now within the jurisdiction of the Village of Islamorada. The Village is now the appropriate entity to work with FDOT on resolving this issue.	No.	Delete policy.
Policy 101.2.9 Designate Card Sound Road as an alternative hurricane evacuation route.	Card Sound Road is designated as an alternative evacuation route.	Yes.	Delete policy. Adopt a new transportation map to show hurricane evacuation routes.
Policy 101.2.10 Initiate a program to reduce the number of vehicles on roads during hurricane evacuation.	This policy requires a modification in behavior so that households with two vehicles will evacuate using only one vehicle. Also, the county can evaluate the likelihood that residents will leave	No.	Evaluate policy. Programs to modify behavior would have to be examined and evaluated to gauge if this is



	their vehicles behind and evacuate using community transportation such as buses.		a valid policy.
Policy 101.2.11 Prepare an EAR of the hurricane evacuation segments of the plan and update evacuation models.	The Florida Keys Hurricane Evacuation Study (Miller Study) was completed in 2001.	Yes.	The model should be updated using best available data. Adopt policy to conduct an annual review of the model with affected municipalities, DCA, and the SFRPC.
Policy 101.2.12 Reconsider capital improvements objectives based upon the needs demonstrated by the revised hurricane evacuation model.	The Hurricane Evacuation Model was updated in 2001. The model proposed various improvements to reduce evacuation time.	No.	Review capital improvements objectives and propose amendments based on needs demonstrated by the hurricane evacuation model.
Objective 216.1 Implement procedures to reduce hurricane evacuation clearance time to 24 hours.	The updated Hurricane Evacuation Model proposed various improvements to reduce evacuation time.	No.	The proposed improvements in the hurricane evacuation model need to be analyzed and reviewed prior to implementation.
Policy 216.1.1 Adopt a Permit Allocation System to limit new residential development to be consistent with the Future Land Use in order to maintain hurricane evacuation clearance times at a maximum of 24 hours.	The Rate of Growth Ordinance (ROGO) system was adopted in 1992. This system was implemented with the goal of keeping hurricane evacuation time under 24 hours. Under the ROGO system a total of 2550 new residential permits for the entire county (excluding Key West, Ocean Reef, and Key Colony Beach) will be issued over 10 years or 255 per year.	Yes.	No amendments necessary.
Policy 216.1.2 Initiate interlocal agreement with the 3 municipalities to establish an entity to allocate the relative proportions of future residential development.	There is no interlocal agreement but the County and municipalities continuously communicate regarding the allocation of ROGO units.	Yes.	Amend the policy to take into account incorporation of new municipalities.
Policy 216.1.3 During hurricane evacuation, designate US 1 and Card Sound Road as evacuation routes as directed by	Complete.	Yes.	Delete policy. Adopt a new transportation map to show hurricane evacuation route.



Emergency Management.			
Policy 216.1.4 Identify deficiencies in Emergency Management staffing and equipment.	On-going activity by Emergency Management.	Yes.	No amendments necessary.
Policy 216.1.5 Apply updated transportation model of the Southeast Florida Hurricane Evacuation Study.	The Florida Keys Hurricane Evacuation Study was completed in 2001. This study served as an update to previous hurricane evacuation models for the Florida Keys.	Yes.	Amendments to annually update the Florida Keys Hurricane Evacuation Study.
Policy 216.1.7 Seek interlocal agreement to increase public education of hurricane awareness.	Emergency Management currently oversees programs to prepare residents and tourists for hurricane evacuation.	Yes.	No amendments necessary.
Policy 216.1.8 Implement procedures for evacuation of hotels, motels, RV parks, mobile home parks, campgrounds, and state and county parks during hurricane evacuation. Require operators of transient facilities to notify guests of procedures at check-in during hurricane season.	Currently, hotels, motels, RV parks, mobile home parks, campgrounds, and state and county parks are required to evacuate 72 hours ahead of possible hurricane evacuation.	Yes.	No amendments necessary.
Policy 216.1.9 Identify special needs populations and implement procedures for safe evacuation of these populations during hurricane evacuation.	Monroe County Social Service offers evacuation transportation to elderly and disabled citizens, if they register.	Yes.	No amendments necessary.
Policy 216.1.10 Coordinate with FDOT to implement program to elevate low segments of US 1.	The County has an on-going agreement with DOT to elevate low segments of US-1.	Yes.	No amendments necessary.
Policy 216.1.11 Adopt LDRs to require hurricane contingency plans of all new and redeveloped marinas.	Not complete.	No.	As part of a proposed Marina Ordinance, the County will draft language to require contingency plans for all new and redeveloped marinas.
Policy 216.1.13 Implement procedures for modifying normal bridge openings during a	Normal bridge operations are suspended (bridges are locked down) during a hurricane evacuation.	Yes.	No amendments necessary.



hurricane evacuation including coordinating with Coast Guard and FDOT.			
Policy 216.1.14 Include a procedure for debris removal during emergencies in Post-Disaster Recovery Plan.	As identified in the Comprehensive Emergency Management Plan (CEMP), the Monroe County Public Works Department is responsible for debris removal and disposal. The Public Works Dept. maintains a detailed Debris Management Plan which describes roles and responsibilities including roles of contract and private agencies.	Yes.	No amendments necessary.
Policy 216.1.15 Consider implementing impact fees to offset public costs associated with hazard mitigation.	Currently, the Code of Ordinances allows collection of impact fees for roads and police facilities, which may help recover part of the cost for hazard mitigation in terms of new roads or public facilities, however, the LDR does not have language regarding the collection of impact fees directly for hazard mitigation.	No.	Study will need to be conducted to analyze the impacts of impact fee for hazard mitigation.
Policy 216.1.16 Coordinate with FDOT to ensure US 1 capacity improvements necessary to maintain hurricane evacuation clearance time at 24 hours.	Monroe County coordinates and provides assistance to FDOT concerning road projects in the Keys.	Yes.	No amendments necessary.
Policy 216.1.17 Develop programs to reduce the number of evacuating vehicles.	This policy requires a modification in behavior so that households with two vehicles will evacuate using only one vehicle. Also, the county can evaluate the likelihood that residents will leave their vehicles behind and evacuate using community transportation such as buses.	No.	Evaluate policy. Programs to modify behavior would have to be examined and evaluated to gauge if this is a valid policy.
Policy 216.1.18 Reduced evacuation clearance times shall not be used to increase development.	Other considerations such as levels of service for public facilities and environmental degradation will be taken into account prior to any increase in development levels.	Yes.	No amendments necessary.
Objective 216.2 Implement a plan to correct existing and projected deficiencies in the number of shelter spaces for Category 1 and 2 storms.	This is an on-going activity for the Emergency Management Division.	Yes.	No amendments necessary.
Policy 216.2.1 Determine the existing level	The Emergency Management Division continue to	Yes.	No amendments necessary.



of deficiencies in the number of shelter spaces for Category 1 and 2 storms and identify existing buildings that could serve as shelters. Present plan for correcting deficiencies to BOCC for adoption.	identify shelter space for Category 1 and 2 storms.		
Policy 216.2.2 Require public facility buildings to be built to hurricane shelter standards, with a minimum of 1 Category 5 building in each EOC district.	Current evacuate plans require all residents to evacuate to the mainland during a hurricane of Category 3 or above. This eliminates the need for a shelter to withstand Category 5 storm.	No.	Delete policy.
Policy 216.2.3 Revise Capital Improvements Program to include necessary funding for construction of at least 1 Category 5 building in each EOC district.	Current evacuate plans require all residents to evacuate to the mainland during a hurricane of Category 3 or above. This eliminates the need for a shelter to withstand Category 5 storm.	No.	Delete policy.
Objective 216.3 Develop and implement a plan providing shelter spaces outside Monroe County for county residents requiring shelter from a Category 3 or greater hurricane.	Monroe County Emergency Management continues to coordinate with adjacent counties and outside agencies to identify shelter space for County residents during a Category 3 or greater hurricane.	Yes.	No amendments necessary.
Policy 216.3.1 Identify shelter spaces outside Monroe County for county residents requiring shelter from a Category 3 or greater hurricane.	The CEMP identifies Florida International University (FIU) South Campus as Monroe County's designated Out-Of-County Shelter. Various other counties by virtue of mutual aid agreement would make additional shelters available, at request of Monroe County Emergency Management.	Yes	No amendments necessary.
Policy 216.3.2 Initiate an intergovernmental agreement with Dade County and other appropriate agencies to provide shelter spaces outside Monroe County for county residents requiring shelter from a Category 3 or greater hurricane.	Monroe County Emergency Management continues to coordinate with adjacent counties and outside agencies to identify shelter space for County residents during a Category 3 or greater hurricane.	Yes.	No amendments necessary.



Policy 216.3.3 Update the Monroe County Behavioral Analysis to determine the number of county residents requiring shelter outside the County during a Category 3 or greater hurricane.	This study will need to be conducted after an evacuation event to determine the demand for shelter space outside of the County during a Category 3 or higher hurricane.	No.	No amendments necessary.
Policy 216.3.4 Evaluate and confirm space available at all shelters and determine deficiencies.	Monroe County Emergency Management continues to evaluate and confirm the availability of shelter space.	Yes.	No amendments necessary.
Policy 1301.1.6 Set up the Monroe County Technical Coordination Committee. These officials will represent the concerns of Community Services, Public Works and Planning.	Monroe County Department heads meet and regularly coordinate to address different issues such as hurricane evacuation and preparation.	Yes.	No amendments necessary.
Policy 1301.4.9 Coordinate with FDOT to ensure that US 1 roadway capacity improvements are placed on FDOT's five year plan to reduce hurricane evacuation clearance times to 24 hours by the year 2010.	Monroe County continues to coordinate with FDOT to review and provide comment on roadway capacity improvements.	Yes.	No amendments necessary.
Objective 1301.8 Initiate the necessary interlocal coordination mechanisms to improve hurricane evacuation times and assure the provision of an adequate number of shelter facilities for evacuating Monroe County residents.	Monroe County Emergency Management currently chairs a working group for the Local Mitigation Strategy.	No.	No amendments necessary. Monroe County with the assistance of DCA, SFRPC, and other municipalities need to form an Emergency Preparedness Work Group. The county will consider an amendment to expand the role of the LMS work group to include other emergency management issues.
Policy 1301.8.2 Initiate an interlocal agreement to increase public education of hurricane awareness.	Monroe County Emergency Management currently chairs a working group for the Local Mitigation Strategy.	No.	No amendments necessary. Monroe County with the assistance of DCA, SFRPC, and other municipalities



			need to form an Emergency Preparedness Work Group. The county should consider an amendment to expand the role of the LMS work group to include other emergency management issues.
Policy 1301.8.4 Develop a plan which will identify the appropriate agencies required for coordination and funding of one Category 5 Emergency Operations Center (EOC), at a minimum, in each of the three EOC districts.	This issue continues to be analyzed by Monroe County Emergency Management.	Yes.	No amendments necessary.
Policy 1301.8.5 Coordinate with the DCA, SFRPC, and Dade County to identify sufficient approved shelter spaces outside of Monroe County.	Monroe County Emergency Management continues to monitor the availability of shelter space outside of Monroe County.	Yes.	Monroe County Emergency Management is in discussion with FIU to identify other buildings on campus that might be used as emergency shelters.
Policy 1301.8.6 Enter into an interlocal agreement with Dade County to provide sufficient additional approved spaces outside of Monroe County capable of withstanding Category 3 or stronger hurricanes.	Monroe County Emergency Management will enter into a dialogue with Dade County to address the availability of shelter space during Monroe County evacuation.	Yes.	No amendments necessary.
Policy 1301.8.7 Coordinate with the U.S. Coast Guard to identify areas of mutual concern during a hurricane evacuation and identify the appropriate coordination mechanisms and procedures.	Monroe County continuously coordinate with the U.S. Coast Guard to identify areas of mutual concern during hurricane evacuation.	Yes.	No amendments necessary.



Summary

Monroe County has taken the following actions to implement the hurricane evacuation policies of the Comprehensive Plan:

- Adopt the Rate of Growth Ordinance (ROGO) that limits the number of new residential building permits for the next ten years to 2,550 or 255 per year for the entire county (excluding Key West, Key Colony Beach and Ocean Reef community). This number is assumed to be the # of permits that would be required to keep hurricane evacuation under 24 hours. Since the adoption of ROGO, the Village of Islamorada and the City of Marathon have incorporated, as a result the number of ROGO allocations for unincorporated Monroe County has been reduced.
- Worked with FDOT to finish a new hurricane evacuation study. This new study estimates hurricane evacuation time at 24 hours and 10 minutes.
- Work with FDOT to study roadway projects and other strategies that could reduce hurricane evacuation time.
- Completion of the Comprehensive Emergency Management Plan and the Post-Disaster Recovery Plan.

Recommendations

To further improve hurricane evacuation time and to improve public safety during a hurricane evacuation, Monroe County must take on the following actions:

- Create a Monroe County Technical Coordination Committee to ensure coordinated efforts between all county departments.
- Create a working group composed of staff from Emergency Management and Monroe County municipalities to discuss updates to the hurricane evacuation model and to coordinate on emergency evacuation issues.
- Create interlocal agreements with adjacent counties or agencies in adjacent counties to provide emergency shelters for evacuating residents.
- Create interlocal agreements between all municipalities (including County) to increase public education and awareness of hurricane evacuation procedures.
- Coordinate with Emergency Management to determine the necessity of having at least one (1) Category 5 building in each EOC district.



**MONROE COUNTY
EVALUATION AND APPRAISAL REPORT (EAR)
ISSUE: WATER QUALITY**

Background

One of the goals of the Comprehensive Plan is the protection and improvement of water quality in the Florida Keys. The common public perception is that water quality in the Florida Keys has deteriorated and this is documented in the decline of the coral reefs and seagrass communities around the Florida Keys.

A range of activities are typically highlighted as contributing to the decline of water quality in the Keys, namely, the lack of a proper central sewer system and an appropriate stormwater management plan.

The Comprehensive Plan addresses water quality improvement in the Florida Keys through two distinct objectives. One is the mandate to provide a series of central sewer systems to serve the Florida Keys by 2010, and secondly, the improvement of nearshore waters by completing and implementing the stormwater master plan.

Two major studies have been completed and are currently under implementation to meet the goal of improving water quality in the Florida Keys.

Stormwater Management Master Plan

As required by the Monroe County Year 2010 Comprehensive Plan, the County completed a Stormwater Management Master Plan (SMMP) in August 2001. The SMMP analyzed the effectiveness of existing systems, prioritized stormwater management needs, identified regulations and policy needs, as well as developed a plan to finance construction, operation and maintenance of required facilities.

The SMMP studied existing systems and found only 254 stormwater structures of which only 2/3 contained stormwater quality treatment system and one-quarter contained wells. The major stormwater system in the Florida Keys consisted of drainage systems along US 1, although many portions of this road had no stormwater controls. Other findings of the study include:



- Based on a survey of properties through the Keys, only 10 to 20 percent of residential areas in the Keys have a stormwater system of any type.
- 40 percent of residential areas had nuisance flooding concerns related to standing water.
- Most areas have vegetated areas along or near residential roads which are not designed to control stormwater.

In order to address the problems and concerns identified in the study, the SMMP recommends that Monroe County take the following actions:

1. Adopt a 95 percent treatment requirement and strictly enforce its application on new development and significant redevelopment.
2. Create an operation and maintenance (O&M) program for public stormwater management systems and inspection of private systems.
3. Monroe County or SFWMD should develop a stormwater well inventory.
4. Monroe County and SFWMD should enforce existing regulations through inspection and as-built drawings.
5. Pay special attention to marinas with respect to stormwater runoff.
6. Encourage redevelopment and retrofit with reductions in impervious areas.
7. Encourage the use of vegetated buffers and conservation measures.
8. Require all vegetated systems such as swales, medians, etc. to be planted with native vegetation to minimize maintenance.
9. With the support of federal, state, and regional governments, Monroe County should implement the recommended retrofit and rehabilitation projects to address existing problem areas.
10. Where possible, FDOT should include stormwater controls as part of all Florida Keys projects including bridge entrances and exits.

To the extent possible, Monroe County will implement the recommendations of the SMMP.



Sanitary Wastewater Master Plan (SWMP)

Another projected completed to fulfill the requirements of the Comprehensive Plan is the completion of a Sanitary Wastewater Master Plan. The objective of the study is to provide an "equitable, ecologically sound, and economical implementation strategy for managing wastewater and improving the water quality in the Florida Keys."¹

The adopted plan is designed to provide cost-effective solutions that improve wastewater management practices throughout the Keys and satisfy the existing and future needs of the community.

To move forward with the recommendations of the SWMP, the study recommends the following actions:

1. Continue to pursue state and federal grant money in association with the FKAA.
2. Request the FKAA to adopt sewer districts as recommended in the Master Plan.
3. Take legal action to establish municipal service districts for the respective sewer districts.
4. Initiate land purchases of wastewater facility sites.
5. Develop and adopt interim onsite wastewater system standards and policies for "hot Spot" areas in coordination with the Florida Department of Health (DOH).
6. Adopt a policy to address the "double charge" issue. (Paying to upgrade an onsite system to a nutrient reduction system, and then paying again to connect to the sewer system when central sewers are completed.)

Table 4.1 on the next page highlights the status of on-going sanitary sewer projects in Monroe County.

¹Monroe County Sanitary Wastewater Master Plan, June 2000.



Table 4.1 Status of Sanitary Sewer Projects
(As of 6/22/04)

Wastewater System Service Area	Estimated Capital Cost	Actual Cost	Federal/State Grant Received	Status
Stock Island/Key West Resort Utility		\$4,600,000		Connections Underway
Big Coppitt Service Area	\$20,500,000			Construction Underway
Lower Sugarloaf Service Area	\$9,350,000			Pending
Summerland/Cudjoe/Upper Sugarloaf Regional	\$34,300,000			Pending
Big Pine Regional	\$55,900,000			Pending
KW Resort Utility (SWT for non reuse)	\$760,000			Pending
Bahia Honda	\$390,000			Pending
Little Venice Phases I and II		\$13,800,000	\$7,100,000	Construction underway
Marathon Regional	\$72,300,000			RFP Undeway, MSTU (Municipal Service Taxing Unit) in place
Conch Key Service Area	\$3,600,000		\$1,600,000	Construction underway
Layton Service Area	\$3,540,000			Pending
Hawk's Cay	\$1,600,000			Pending
West End Long Key	\$380,000			Pending
East End Long Key	\$290,000			Pending
Islamorada/Plantation Key		\$8,500,000	\$6,000,000	Construction Bids Received
Islamorada Regional	\$66,800,000			Pending
Key Largo Regional	\$119,400,000			Pending
Key Largo Park & Trailer		\$12,000,000	\$9,400,000	Construction Bids



Village				Received
Ocean Reef Club		\$5,660,000	\$1,000,000	Construction Complete
PAED 22 at Snake Creek	\$200,000			Pending
PAED 22 at County Line	\$460,000			Pending
Onsite upgrade of Unknown Systems	\$3,525,000			Pending
Onsite Upgrade in 2010	\$12,750,000			Pending
Total	\$410,545,000	\$44,560,000	\$30,300,000	

Cesspools

Another activity implemented to meet the objective of improving water quality is the elimination of cesspools and cesspits in the Keys. As a key component of the initial Five-Year Work Program, the cesspit elimination program has undergone a number of changes. It is estimated that there are 23,000 private onsite systems which includes 7,200 unknown systems, of which, 2,800 are believed to be cesspools.

To address the elimination of cesspools, Monroe County adopted Ordinance No. 03-1997. This ordinance essentially allowed all property owners of On-site sewage treatment and disposal systems (OSTDS) to ascertain their legality and effectiveness, if not they were required to make sure that they are working properly.

In 1999, the Governor and Cabinet revised the work program to designate that all cesspool identification and elimination outside of the "Hot Spot"² areas shall be complete by June 12, 2003. In response to the guidelines established in the Work Program, Monroe County adopted Ordinance 031-1999 which focused identification and elimination of the cesspools to areas outside of the "Hot Spot" areas.

By July 2003, the Department of Health reports that a total of 727 cesspools were removed or replaced. In turn, Monroe County reported that cesspools in cold spots have been eliminated. Marathon has no cold spots so they are not required to eliminate cesspools until 2010.

² "Hot Spots" is a term used in Monroe County Ordinance 031-1999 to identify those areas which are covered as part of a central sewer system by the year 2010.



Evaluation and Analysis of Comprehensive Plan Objectives and Policies

Objectives, Policies Summary	Current Conditions/Amendments to Policy since original adoption	Is Objective or Policy accomplished or being implemented ?	Need for Future Comprehensive Plan Amendments
Objective 101.9 Provide drainage and stormwater management to protect property and water quality.	Monroe County has completed the SMMP that is being implemented through various means such as on-going FDOT road projects, and private development. Monroe County will continue to review projects to ensure that standards are met. Monroe County continues to acquire funding from the South Florida Water Management District and other sources to implement stormwater projects.	Yes.	No amendments necessary.
Policy 101.9.1 Adopt level of service standard for stormwater management	Monroe County has completed a SMMP that is being implemented through various means such as on-going FDOT road projects, and private development. Monroe County will continue to review projects to ensure that standards are met. Monroe County continues to acquire funding from the South Florida Water Management District and other sources to implement stormwater projects.	Yes.	No amendments necessary.
Policy 101.9.2 Adopt a Stormwater Management Ordinance.	Section 9.5-293 of the LDRs serves as the Stormwater Management Ordinance for Monroe County.	Yes.	No amendments at this time. A review of the SMMP will be conducted to identify the need for LDR amendments.
Policy 101.9.3 Maintain a 5-year schedule of stormwater management capital improvements.	The SMMP contains a list of priority projects.	No.	The County will monitor the Capital Improvements Program to implement priority list of projects in the SMMP.



Policy 101.9.4 Complete a Stormwater Management Plan.	The SMMP was completed in 2001.	Yes.	The County will amend this policy to implement the SMMP.
Objective 101.10 Work cooperatively with Dade County to protect Florida City Wellfield	Monroe County and the FKAA continuously monitor development in Dade County to protect Florida City Wellfield.	Yes.	No amendments necessary.
Policy 101.10.1 Protect the Florida City Wellfield through the Dade County Code and SFWMD's water policies	Monroe County and the FKAA continuously monitor development in Dade County to protect Florida City Wellfield.	Yes.	No amendments necessary.
Policy 101.10.2 Seek an interlocal agreement with Dade County to provide input into issues related to protection of the Florida City Wellfield.	Monroe County and the FKAA continuously monitor development in Dade County to protect Florida City Wellfield.	Yes.	No amendments necessary.
Objective 102.5 Implement water quality protection program.	Monroe County continues to participate in various programs to improve water quality. Monroe County has worked on eliminating cesspits and the completion of a SMMP, SWMP. Monroe County is currently coordinating with other agencies to implement both the SMMP, and the SWMP.	Yes.	No amendments necessary.
Policy 102.5.1 Development and implement procedures to reduce pollutant discharges from: -OSDS -secondary sewage treatment system -live-aboards -marinas -stormwater runoff	Monroe County has worked on eliminating cesspits and the completion of a SMMP, SWMP. Monroe County is currently coordinating with other agencies to implement both the SMMP, and the SWMP. Monroe County has established a "No Discharge Zone" to protect water quality.	Yes.	No amendments necessary.
Policy 102.5.2 Support enforcement of wastewater discharge permits for seafood processors and other industrial dischargers.	The Monroe County Marine Resources Department coordinates with state and federal agencies on water quality improvements.	Yes.	Delete Policy. Standards for wastewater discharge in the Keys are now part of the State Statutes.
Policy 102.5.3 Develop and implement program to reduce water quality impacts of recreational boating.	This is an on-going activity for the Monroe County Marine Resources Dept. since the completion of the Boating Impacts Management Plan in 1992. This policy continues to be implemented through	Yes.	No amendments necessary.



	activities such as: 1. Channel marking program. 2. Location of mooring field. 3. Regulating liveaboards. 4. Establishing state waters as a No Discharge Zone.		
Policy 102.5.4 Adopt LDRs pertaining to dredge and fill.	Ordinance 07-2002 established regulations for fill. Dredging is only permitted to maintain public navigational channels.	Yes.	No amendments necessary.
Policy 102.5.5 Develop and implement program to reduce pollutant discharges from soil erosion and sedimentation.	State regulations control practices to reduce pollutant discharges from soil erosion and sedimentation.	No.	Delete policy.
Policy 102.5.6 Promote mosquito control techniques which will reduce entry of pollutants into ground and surface waters.	Mosquito Control has changed how they control mosquitoes by using technologies that uses lower volume of chemicals to treat equal amounts of areas.	Yes.	No amendments necessary.
Policy 102.5.7 Support Monroe County HRS Unit and DER activities to reduce pollutant discharges from aboveground and underground storage tanks.	State regulations regulate design of aboveground and underground storage tanks.	Yes.	No amendments necessary.
Objective 202.1 Participate in development and implementation of the Florida Keys National Marine Sanctuary (FKNMS) Water Quality Protection Program.	A County Commissioner sits on the Sanctuary Advisory Committee and the Marine Resources Division sits on the Water Quality Protection Program Steering Committee.	Yes.	No amendments necessary.
Policy 202.1.1 Participate in Phase I of the FKNMS Water Quality Protection Program and seek to enter into interagency agreements to complete special studies identified as a result of Phase I findings.	Marine Resources Division staff participated in the development or lead the development of various studies and programs that addressed Phase I of the FKNMS Water Quality Protection Program. These studies included: 1. Stormwater Management Master Plan. 2. Sanitary Wastewater Master Plan. 3. Cesspool elimination program. 4. Coral replanting and Seagrass bed monitoring.	Yes.	No amendments necessary.
Policy 202.1.2 Participate in Phase II of the	Monroe County has participated in	Yes.	No amendments necessary.



FKNMS Water Quality Protection Program.	implementing or has implemented various projects associated with Phase II such as: 1. Completion of cesspools in cold spots. 2. Completion of the SMMP and SWMP. 3. Implementation of various projects in the SMMP and SWMP.		
Policy 202.1.3 Revise county policies and regulations pertaining to water quality protection.	Monroe County has completed the SWMP and SMMP.	Yes.	Various LDR amendments have been passed to implement findings of the SWMP and SMMP. The County will continue to draft amendments to the LDRs and the Comp. Plan to implement findings of the SWMP and SMMP.
Policy 202.1.4 Seek to enter into interagency agreements defining responsibilities for the Florida Keys Water Quality Monitoring Program.	Responsibilities for the Florida Keys Water Quality Monitoring Program are understood between DEP, the Sanctuary, EPA, the SFWMD, and Monroe County.	No.	The County will discuss with the affected agencies about the need for an interagency agreement.
Policy 202.1.5 Maintain the M.C. Dept. of Marine Resources as the county department responsible for coordination and implementation of FKNMS Water Quality Protection Program.	The Marine Resources Dept. continues to be the lead county agency for coordination and implementation of the FKNMS Water Quality Protection Program.	Yes.	This policy will be amended to name the Growth Management Division as the lead agency for coordinating with FKNMS.
Objective 202.2 Develop and implement procedures to reduce pollutant discharges into ground and surface waters from on-site disposal systems.	Monroe County has completed and is implementing the SWMP.	Yes.	The implementation of the SWMP will create community or regional sewer treatment plants will eliminate the need for OSDS by 2010.
Objective 202.3 Develop and implement procedures to reduce pollutant discharges from wastewater treatment plants.	Monroe County completed the SWMP which recommends that existing facilities upgrade their technology to meet the best available technology/advanced wastewater treatment.	Yes.	The SWMP recommends the upgrade of these systems or the connection of existing wastewater treatment plans to either community or regional system by 2010.
Objective 202.4 Develop and implement	Monroe County and all municipalities have	Yes.	No amendments necessary.



procedures to reduce pollutant discharges from moored/anchored vessels (live-aboards).	designated state waters as a No Discharge Zone. Mooring fields are being established to better control water impacts from live-aboards.		
Policy 202.4.1 Adopt LDR's pertaining to live-aboard vessels.	LDRs have been adopted requiring live-aboard vessels to have wastewater pumped out since the Florida Keys is a "No Discharge Zone".	Yes.	No amendments necessary.
Policy 202.4.2 Complete live-aboard vessel study.	A complete live-aboard vessel study has not been completed.	No.	Marine Resources staff will request policy direction from the Board of County Commissioners regarding the live-aboard study.
Policy 202.4.3 Coordinate development of live-aboard management regulations with FKNMS Management Plan.	In coordination with the FKNMS Management Plan, Monroe County established the "No Discharge Zone".	Yes.	No amendments necessary.
Policy 202.4.4 Adopt additional LDR revisions pertaining to live-aboards	Monroe County established the "No Discharge Zone".	Yes.	Amendments are needed to require live-aboards to pump out waste water when in the "No Discharge Zone"
Policy 202.4.5 Adopt a plan for public pump-out facilities in county owned locations.	There is no master plan for public pump-out facilities in county owned locations. However, the County has established a program to assist marinas with construction of pump out facilities. Eventually, county owned facilities will have pump-outs available.	Yes.	No amendments necessary.
Objective 202.5 Develop and implement procedures to reduce pollutant discharges from marinas and fueling facilities.	Not completed.	No.	Marine Resources will review the necessity for drafting new LDR language to address this policy.
Policy 202.5.1 Adopt LDR's requiring new marinas having ten (10) slips or more to provide pumpout and sewage treatment facilities.	Complete all new development are required to provide pumpout and sewage treatment facilities	Yes.	No amendments necessary.
Policy 202.5.2	Complete all new development are required	Yes.	No amendments necessary.



Adopt LDRs requiring existing marinas having ten (10) slips or more, to provide pumpout and sewage treatment facilities as a condition of permit issuance for any proposed improvements.	to provide pumpout and sewage treatment facilities		
Policy 202.5.3 Adopt LDR's requiring existing marinas having ten (10) slips or more (or at which a live-aboard is docked) to provide (or submit a plan to provide) pumpout and sewage treatment facilities. Notify marina owners of retrofitting requirement.	Not completed.	No.	Marine Resources will analyze feasibility of LDR amendment to require pump-out facilities in existing marinas of a significant size.
Policy 202.5.4 Require annual operating permits for all marinas having ten (10) slips or more.	Not completed.	No.	Marine Resources Dept. will draft an ordinance to implement this policy.
Policy 202.5.5 Implement enforcement program to ensure compliance with state and federal regulations pertaining to storage and handling of hazardous materials and wastes at marinas.	The County coordinates with state and federal agencies to monitor hazardous materials and wastes at marinas.	Yes.	No amendments necessary.
Objective 202.6 Support enforcement of wastewater discharge permits for seafood processors and other industrial dischargers.	This objective is being implemented by the DEP who reviews permits for wastewater treatment plants.	Yes.	Delete policy.
Policy 202.6.1 Request that DER pursue alternatives to surface water discharges for all industrial discharges not already discharging to boreholes (particularly seafood processors).	There are currently no users with surface water discharge.	Yes.	Delete policy.
Policy 202.6.2 Request that DER require industrial waste discharge permits for all seafood processors.	DEP requires all industrial users to have a permit for their wastewater plant.	Yes.	No amendment necessary.
Policy 202.6.3 Adopt LDR's pertaining to disposal of fish and shellfish by-products from seafood processing facilities.	There are no LDRs pertaining to disposal of fish and shellfish by-products, the DEP currently enforces the state regulations for discharge of wastewater.	Yes.	No amendments necessary.
Objective 202.7	This is an on-going activity for the Monroe	Yes.	This policy continues to be



Develop and implement program to reduce water quality impacts of recreational boating.	County Marine Resources Dept. since the completion of the Boating Impacts Management Plan in 1992.		implemented through activities such as: 1. Channel marking program. 2. Location of mooring field. 3. Regulating liveaboards. 4. Establishing state waters as a No Discharge Zone.
Objective 202.8 Adopt LDR's pertaining to dredge and fill activities.	Monroe County Ordinance 07-2002 created rules for fill activities in the Keys. Dredge is prohibited in the Keys except to maintain public navigational channels.	Yes.	No amendments necessary.
Policy 202.8.1 Support existing state and federal regulations pertaining to dredge and fill activities, except where the County is more restrictive.	The County supports limits to dredge and fill activities in the Keys	Yes.	No amendments necessary.
Policy 202.8.2 Continue to prohibit new dredging.	LDR Section 9.5-348 prohibits new dredging except for boat ramps.	Yes.	No amendments necessary.
Policy 202.8.3 Continue to prohibit maintenance dredging within areas vegetated with seagrass beds, except where needed to maintain public navigation access.	LDR Section 9.5-348 prohibits dredging except to maintain public navigation access.	Yes.	No amendments necessary.
Policy 202.8.4 Limit maintenance dredging in artificial waterways to minus six (-6) feet mean low water.	LDR Section 9.5-348 limits dredging in artificial waterways to minus six (-6) feet mean low water.	Yes.	No amendments necessary.
Policy 202.8.5 Limit disposal of dredged spoil to permitted upland sites where drainage can be contained.	LDR Section 9.5-348 requires all dredged spoil materials to be placed on permitted upland sites designed and located to prevent runoff of spoil material into wetlands or surface waters.	Yes.	No amendments necessary.
Policy 202.8.6 Deny permits for dredge and fill activities undertaken without permits and require removal of all illegal structures and fill.	LDR Section 9.5-348 requires approvals by the DEP and ACOE prior to issuance of a county permit.	Yes.	No amendments necessary.
Policy 202.8.7 Develop schedule of monetary penalties for dredge and fill violations.	Monroe County dredge and fill regulations require that all fill work done without a	Yes.	No amendments necessary.



Establish fund for penalty revenues to be used for water quality enhancement projects.	permit shall be recovered and all damages mitigated.		
Objective 202.9 Develop and implement program to reduce pollutant discharges from stormwater runoff.	Monroe County has completed a SMMP that is being implemented through various means such as on-going FDOT road projects, and private development. Monroe County will continue to review projects to ensure that standards are met. Monroe County continues to acquire funding from the South Florida Water Management District and other sources to implement stormwater projects.	Yes.	No amendments necessary.
Objective 202.10 Develop and implement program to reduce pollutant discharges from soil erosion and sedimentation.	This objective is addressed by the completion of the SMMP and the establishment of a LOS for stormwater treatment.	Yes.	No amendments necessary.
Policy 202.10.1 Identify technical assistance available for U.S.D.A.-S.C.S. District Conservationist for development of soil erosion and sedimentation control program.	Any development in the Florida Keys is required to meet the requirements of the Surface Water Management Criteria in the Land Development Regulations. This section of the code requires a minimum level of treatment for stormwater which in turn controls soil erosion and sedimentation	Yes.	No amendments necessary.
Policy 202.10.2 Adopt best management practices (BMP's) for soil erosion and sedimentation control.	Surface Water Management Criteria requires BMP to prevent degradation of nearshore water quality.	Yes.	No amendments necessary.
Policy 202.10.3 Adopt a stormwater management ordinance, including by reference, BMP's for soil erosion and sedimentation control.	Monroe County has completed the SMMP that is being implemented through various means such as on-going FDOT road projects, and private development. Monroe County will continue to review projects to ensure that standards are met. Monroe County continues to acquire funding from the South Florida Water Management District and other sources to implement stormwater projects.	Yes.	No amendments necessary.



Policy 202.10.4 Require use of BMP's for soil erosion and sedimentation control as a condition of land development orders	The existing LDRs currently prescribe the use of BMP for controlling soil erosion and sedimentation as part of development review.	Yes.	No amendments necessary.
Policy 202.10.5 Identify erosion and sedimentation control problem areas within existing subdivisions.	A review of erosion and sedimentation control problem areas is built into the permit review process to ensure BMP for controlling soil erosion and sedimentation.	Yes.	No amendments necessary.
Policy 202.10.6 Adopt LDR's pertaining to shoreline stabilization.	There are no comprehensive rules in the LDRs regarding shoreline stabilization.	Yes.	Draft a comprehensive ordinance on shoreline stabilization.
Policy 202.10.7 Identify shoreline erosion problems areas.	There are no significant shoreline erosion problems in the Florida Keys.	No.	Delete policy.
Policy 202.10.8 Require mining activities to be conducted in accordance with sedimentation and erosion control plans.	There are no active mines in the Keys.	No.	Delete policy.
Objective 202.11 Promote mosquito control techniques which will reduce entry of pollutants into ground and surface waters.	Mosquito Control has changed how they control mosquitoes by using technologies that uses lower volume of chemicals to treat equal amounts of areas.	Yes.	No amendments necessary.
Policy 202.11.1 Coordinate with Monroe County Mosquito Control Board, EPA and FKNMS regarding aerial applications of insecticides.	Mosquito Control has changed how they control mosquitoes by using technologies that uses lower volume of chemicals to treat equal amounts of areas.	Yes.	No amendments necessary.
Policy 202.11.2 Request that state undertake research study of alternatives to aerial applications of insecticide for mosquito control.	Mosquito Control has changed how they control mosquitoes by using technologies that uses lower volume of chemicals to treat equal amounts of areas.	Yes.	No amendments necessary.
Policy 202.11.3 Until alternatives are devised, develop and implement a mosquito spraying program which minimizes environmental impacts.	Mosquito Control has changed how they control mosquitoes by using technologies that uses lower volume of chemicals to treat equal amounts of areas.	Yes.	No amendments necessary.
Objective 202.12 Support Monroe County HRS Unit activities to reduce pollutant discharges	State regulations regulate design of aboveground and underground storage	Yes.	No amendments necessary.



from aboveground and underground storage tanks.	tanks.		
Policy 202.12.2 Support Monroe County HRS Unit activities to expand its storage tank program to involve all storage tank facilities in the Keys.	State statutes regulate standards for storage tank facilities.	Yes.	No amendments necessary.
Policy 202.12.3 Establish LDR's that require all new and replacement petroleum and gasoline storage facilities to be double walled.	State statutes require that all new and replacement petroleum and gasoline storage facilities to be double walled.	Yes.	No amendments necessary.
Objective 202.14 Determine the appropriate use of aerators and backfilling as a means of improving water quality in artificial waterways.	The Residential Canal Inventory Assessment was completed in 2004. This study analyzed methodologies for improving water quality in closed canals.	Yes.	No amendments necessary.
Policy 202.14.1 Coordinate with state and federal agencies to identify water quality and permitting issues related to use of aerators and backfilling in artificial waterways.	The Residential Canal was completed in 2004. This study analyzed methodologies for improving water quality in closed canals. Implementing of this study will require coordination with state and federal agencies to acquire the necessary permits	Yes.	No amendments necessary.
Policy 202.14.2 Support an independent research study to determine applications and impacts of aeration and backfilling in artificial waterways.	This policy was accomplished with the completion of the Residential Canal Inventory Assessment.	Yes.	No amendments necessary.
Policy 202.14.3 Request that DER consider special rule pertaining to use of aerators and backfilling in artificial waterways in the Keys.	DEP worked with the county in reviewing the findings of the Residential Canal Inventory Assessment. The assessment concluded that the use of aerators and backfilling in certain areas can improve water quality.	Yes.	No amendments necessary.
Objective 202.15 Determine the appropriate treatment for water quality problems in plugged artificial waterways.	The Residential Canal Inventory Assessment recommended the following solutions for improving water quality: 1. Backfilling canals to reduce canal depth.	Yes.	No amendments necessary.



	2. Aeration. 3. Implementation of the SWMP and SMMP		
Policy 202.15.1 Coordinate with state and federal agencies to identify water quality and permitting issues related to unplugging artificial canals.	The Residential Canal Inventory Assessment analyzed this situation and found that unplugging canals without affecting water quality may not be possible.	Yes.	No amendments necessary.
Policy 202.15.2 Request that DER consider special rule pertaining to unplugging of residential canals.	DEP will not permit unplugging of residential canals when there is a negative effect on water quality.	Yes.	No amendments necessary.
Objective 202.16 Coordinate with state and federal agencies regarding water quality issues related to mainland Florida which affect the Keys.	The Growth Management Division participated in the following programs: 1. Comprehensive Everglades Restoration Plan. 2. Governors Commission for a Sustainable South Florida. 3. Florida Keys Tidal Restoration Plan. 4. Florida Bay Circulation and Exchange Study.	Yes.	No amendments necessary.
Policy 202.16.1 Meet periodically with state and federal agencies to discuss water quality issues related to mainland Florida which affect the Keys.	Monroe County Growth Management continues to participate in the on-going Comprehensive Everglades Restoration Plan.	Yes.	No amendments necessary.
Policy 202.16.2 Participate in future revisions to SWIM plans for the Everglades and Biscayne Bay.	Monroe County continuously coordinates with the SFWMD on special studies.	Yes.	No amendments necessary.
Policy 207.7.5 Identify freshwater lens systems and recharge areas. Implement measures to protect quantity and quality of groundwater recharge to freshwater lenses.	Complete.	Yes.	No amendments necessary.
Objective 901.1 Ensure that sanitary	Florida Law requires the establishment of community or regional wastewater	Yes.	No amendments necessary.



wastewater treatment and disposal facilities are available at the adopted LOS concurrent with development.	treatment facility to serve the Florida Keys by 2010. Building permits for new development are not issued unless they have adequate sewage treatment facility. When community or regional wastewater treatment facility is available, new development will be required to hook-up to existing facility.		
Policy 901.1.1 Sanitary wastewater level of service standards.	The Comprehensive Plan Work Plan requires the establishment of community or regional wastewater treatment facility by 2010. LDRs contain language to establish level of service standards for wastewater. Building permits for new development are not issued unless they have adequate sewage treatment facility. When community or regional wastewater treatment facility is available, new development will be required to hook-up to existing facility.	Yes.	No amendments necessary.
Policy 901.1.2 Adopt LDR's with a Concurrency Management System for the provision of adequate wastewater treatment facilities.	Current LDRs has language that requires development that meet criteria in the F.A.C.	Yes.	Although language in the LDRs exist. Monroe County Planning will review existing language to ensure that it is adequate to implement the SWMP.
Policy 901.1.3 Ensure that all sanitary wastewater facility improvements are consistent with LOS's standards.	The Comprehensive Plan Work Plan requires the establishment of community or regional wastewater treatment facility by 2010. The existing LDRs has language to meet criteria in the F.A.C. The SWMP recommends that all existing wastewater treatment plants upgrade to AWT/BAT or hook up to a community or regional treatment plant by 2010. Monroe County with FKAA are working to obtain funding to implement the findings of the SWMP.	Yes.	No amendments necessary.



Policy 901.1.4 Ensure compliance with applicable wastewater treatment regulations.	The Comprehensive Plan Work Plan requires the establishment of community or regional wastewater treatment facility by 2010. The existing LDRs has language to meet criteria in the F.A.C. The SWMP recommends that all existing wastewater treatment plants upgrade to AWT/BAT or hook up to a community or regional treatment plant by 2010. Monroe County with FKAA are working to obtain funding to implement the findings of the SWMP.	Yes.	No amendments necessary.
Policy 901.1.5 Include positive point ratings for certain wastewater treatment systems in the permit allocation and point system.	There is no evaluation criteria in ROGO for advanced wastewater treatment systems.	No.	The County will analyze updating this policy.
Policy 901.1.6 Adopt permanent OSDS LOS standards based on the findings of the Sanitary Wastewater Master Plan.	The SWMP proposes replacement of OSDS by connecting to a community or regional treatment plant or replacement by a OWNRS.	No.	The SWMP needs to be reviewed and analyzed for possible amendments to the Comprehensive Plan and LDRs.
Policy 901.1.7 Complete preliminary engineering for a sludge, septage and/or leachate treatment and disposal facility at Crawl Key.	The SWMP provides a comprehensive countywide approach to providing sewer system to most residents and businesses in the county. Locations for treatment plants will be addressed after analysis of all available locations.	No.	Delete policy.
Policy 901.1.8 Construct a septage, sludge, and/or leachate treatment and disposal facility on Crawl Key.	The SWMP provides a comprehensive countywide approach to providing sewer system to most residents and businesses in the county. Locations for treatment plants will be addressed after analysis of all available locations.	No.	Delete policy.
Objective 901.2 Correct existing sanitary wastewater facility deficiencies.	The SWMP recommends that existing treatment plants connect to a community or regional treatment plant by 2010 or upgrade to BAT/AWT. Cesspit replacement program in cold spots have also been completed.	No.	No amendments necessary.



	However, Monroe County and FKAA continue to seek funding to ensure full implementation of the SWMP.		
Policy 901.2.1 Develop and adopt a wastewater treatment inspection/compliance program with remedial actions for OSDS.	Ordinance 31-1999 created an inspection and compliance program for unknown and unpermitted on-site sewage disposal. Cesspit replacement program in cold spots have also been completed.	Yes.	No amendments necessary.
Policy 901.2.2 Develop and implement regulations designed to reduce pollutant discharges into nearshore water from moored and anchored vessels.	Monroe County established a "No Discharge Zone" consistent with borders established by the FKNMS.	Yes.	No amendments necessary.
Policy 901.2.3 Enter into interlocal agreement with HRS to specify the responsibilities and procedures for the OSDS inspection/compliance program.	Ordinance 31-1999 specified that the Monroe County Health Department will be responsible for administering the unpermitted OSDS program. An MOU exists between Monroe County and the Monroe County Health Department. Program completed.	Yes.	Delete policy.
Policy 901.2.4 Adopt an ordinance which specifies the implementation procedures for the OSDS inspection/compliance program.	Ordinance 31-1999 specified that the Monroe County Health Department will be responsible for administering the unpermitted OSDS program. Program completed.	Yes.	Delete policy.
Policy 901.2.5 Complete Phase I of OSDS inspection/compliance program within two years of the initiation of the program from the effect date of the plan.	On July 2003, Monroe County reported that all cesspits in "cold spots" have been eliminated. Program completed.	Yes.	Delete policy.
Policy 901.2.6 Initiate Phase II of the OSDS inspection/compliance program.	On July 2003, Monroe County reported that all cesspits in "cold spots" have been eliminated. Program completed.	Yes.	Delete policy.
Policy 901.2.7 Require property owners to have septic tanks pumped out at the time of each inspection.	There is no requirement for property owners to pump out septic tanks at the time of inspection.	No.	As an alternative to pumping out septic tanks, all OSDS requires a maintenance contract with a licensed



			septic tank contractor.
Policy 901.2.8 OSDS which are found in non-compliance with the inspection/compliance program shall be required to upgrade within 180 days.	On July 2003, Monroe County reported that all cesspits in "cold spots" have been eliminated. Program completed.	Yes.	Delete policy.
Policy 901.2.9 Program costs of Phase I may be funded through federal and state sources. Program costs of Phase II shall be funded by a special taxing district. Property owners will be responsible for funding the replacement or improvement of illegal or inoperative systems.	On July 2003, Monroe County reported that all cesspits in "cold spots" have been eliminated. All other OSDS in "hot spots" will be required to connect to a central sewer system once it becomes available. Ordinance 4-2000 requires connection to central sewer system within 30 days of availability. Policy accomplished.	Yes.	Delete policy.
Objective 901.3 Ensure maximum use of existing wastewater treatment facilities to discourage urban sprawl.	Under current ROGO system maximum positive points are given to lots in areas served by infrastructure.	Yes.	Delete policy.
Policy 901.3.1 Assign a positive permit allocation point in the LDR's for utilizing systems operating above adopted LOS.	There are no points awarded for development utilizing advanced systems. Under the proposed amendment to adopt the Tier system. Areas served by infrastructure in infill areas will receive maximum positive points.	No.	Delete policy.
Policy 901.3.2 Establish priorities for the extension or replacement of wastewater collection, treatment and disposal facilities.	Completion of SWMP, established a ranking system for the implementation of the central wastewater system.	Yes.	Monroe County and the FCAA are implementing the findings of the SWMP.
Policy 901.3.3 Maintain a five-year schedule of capital needs for wastewater treatment and disposal facilities.	Completion of SWMP, established ranking for the implementation of the central wastewater system.	Yes.	Monroe County and the FCAA are continuing efforts to acquire funding for the implementation of the SWMP.
Objective 901.4 Prepare a Sanitary Wastewater Master Plan.	SWMP completed in 2001.	Yes.	Change objective to read that SWMP will be implemented.
Policy 901.4.1 Establish which entities will	SWMP completed in 2001. This study included the establishment of a Technical	Yes.	Delete policy.



participate in the development of the Sanitary Wastewater Master Plan.	Advisory Committee (TAC) which consisted of staff from all the municipalities in the Keys and the various government agencies such as (EPA, DEP, DOH, ACOE, SFWMD, DCA, US Fish and Wildlife.		
Policy 901.4.2 Amend the Monroe County Building Code to include building permit notification procedures related to central sewer hook-up requirements.	Section 15.5-21 of Monroe County Code of Ordinances includes notification requirements related to central sewer hook-up requirements. Activities necessary for implementation of this policy is complete.	Yes.	Delete policy.
Policy 901.4.3 Initiate a program of testing alternative OSDS systems to ascertain feasibility of widespread application.	DEP has limited program for testing various OSDS systems. Marine Resources will seek funding in conjunction with DEP to fund this study.	Yes.	No amendments necessary.
Policy 901.4.4 Enter into an intergovernmental agreement with state and federal agencies to study and document sewage related pollutant loads in nearshore waters.	Data has been collected from near-shore waters in the Little Venice area of Marathon. This data will be the baseline used for comparison once the central sewer system for the Little Venice neighborhood is functioning.	Yes.	No amendments necessary.
Policy 901.4.5 Adopt LDR's establishing density criteria for OSDS.	There are currently no density criteria for OSDS.	No.	The implementation of the SWMP will eliminate most OSDS.
Policy 901.4.6 Establish operational standards for sanitary wastewater facilities based on Sanitary Wastewater Master Plan.	The SWMP was completed in May 2000 and established operational standards.	Yes.	No amendments necessary.
Policy 901.4.7 Complete detailed inventory and evaluation of wastewater treatment facilities.	The SWMP conducted a detailed inventory and evaluation of wastewater treatment facilities.	Yes	No amendments necessary.
Policy 901.4.8 Amend Chapter 10D-6 to incorporate treatment standards resulting from the Sanitary Wastewater Master Plan.	Treatment standards from the Sanitary Wastewater Master Plan have been incorporated into the FAC in Chapter 64E.	Yes.	No amendments necessary.
Policy 901.4.9 Requires hook up to central sewer system when available. Where a central sewer system becomes available, existing uses	The SWMP was completed in May 2000. Monroe County Code of Ordinances Sec. 15.5-21 requires connection to the system	Yes.	No amendments necessary.



shall be required to connect within 1 year.	within 30 days of actual availability of the system.		
Policy 901.4.10 In coordination with appropriate agencies prepare annual reports indication the status of the Sanitary Wastewater Master Plan.	The SWMP was completed in May 2000. As part of the Comprehensive Plan Work Program, the Growth Management Division provides an update on the status of implementing the Sanitary Wastewater Master Plan	Yes.	No amendments necessary.
Objective 901.5 Regulate land use to conserve potable water, protect natural drainage features and groundwater.	Monroe County has accomplished this objective through the following actions: 1) The ROGO point allocation system awards additional points for water conservation features such as low-flow toilets, showerheads, faucets, 2) Surface Water Management System in the LDRs which require BMP techniques, 3) Completion and on-going implementation of the SWMP and SMMP.	Yes	No amendments necessary.
Policy 901.5.1 Interlocal agreement to develop a near shore water quality monitoring program.	Monroe County coordinates with various state and federal agencies to monitor near shore water quality.	Yes.	No amendments necessary.
Policy 901.5.2 Utilize results of the Sanitary Wastewater Master Plan to prioritize construction of wastewater treatment and disposal facilities.	The SWMP was completed in May 2000. Monroe County and FKAA continue to implement the recommendations of the SWMP.	Yes.	No amendments necessary.
Policy 901.5.3 Incorporate amended OSDS standards in the LDR's and amend LOS standards in Comprehensive Plan.	The SWMP was completed in May 2000. LDR Section 9.5-294 provides criteria for wastewater treatment.	Yes.	Monroe County will review the SWMP and amend the Comprehensive Plan and LDRs based on recommendations of the SWMP.
Policy 901.5.4 Ensure that sewage disposal facilities are designed to prevent untreated effluent discharge in the event of a power	LDR Section 9.5-294(b)(2) provides language that "Sewage disposal facilities shall be designed and located so that in the	Yes.	No amendments necessary.



failure.	event of power failure, untreated effluent will not be discharged into any surface body of water or any wetland. "		
Policy 901.5.5 Ensure that effluent discharge points are not located in close proximity to surface waters and ASR areas.	LDR Section 9.5-294(b)(3) states that "Sewage disposal facilities shall be located such that any discharge point, whether by shallow or deep well, is located as far as possible from any surface body of water without violating any other setback requirement established by chapter 10D-6, Florida Administrative Code. "	Yes.	No amendments necessary.
Policy 901.5.6 Require OSDS to be located on the least environmentally sensitive portion of a parcel.	Clustering provision in the LDR will require OSDS to be located on the least environmentally sensitive portion of a parcel.	Yes.	No amendments necessary.
Policy 901.5.7 Adopt LDR's that prohibit OSDS in buttonwood, salt marsh or wetland areas and institute buffering requirements and determine whether OSDS may be used in disturbed wetlands.	Buttonwood, salt marsh and wetland areas have 100% open space requirements.	Yes.	No amendments necessary.
Policy 901.5.8 Ensure wastewater treatment facilities are designed in accordance with the adopted LOS design standards.	All treatment plants will have to meet the LOS standard for treatment and design.	Yes.	No amendments necessary.
Policy 901.5.9 Investigate potential for treated wastewater reuse/recycling.	The SWMP was completed in May 2000. The SWMP investigated the potential for using treated wastewater. The SWMP found the reuse of treated wastewater more difficult to implement in the Keys than other areas due to high cost and limited availability of suitable areas to irrigate.	Yes.	No amendments necessary.
Policy 901.5.10 Minimize or eliminate the use of products containing phosphorous.	Monroe County Code of Ordinance Section 13.11 Regulates the sale of detergents with phosphorous to no more than 0% to .5% by weight.	Yes.	No amendments necessary.



Policy 901.5.11 Evaluate AWT as the first option for wastewater treatment for central sewer and package plants. Evaluate effluent use as first option for effluent reuse.	The SWMP was completed in May 2000. The study evaluated various options for level of treatment for central sewer and package plants. The SWMP recommends the use of AWT/BAT treatment for all central sewer systems. The SWMP also found the reuse of treated wastewater more difficult to implement in the Keys than other areas due to high cost and limited availability of suitable areas to irrigate.	Yes.	No amendments necessary.
Policy 901.5.12 Inventory and evaluate public and private lands to determine applicability for effluent reuse.	The SWMP completed in May 2000 evaluated public and private lands to determine applicability for effluent reuse. The SWMP found limited availability of suitable areas to irrigate.	Yes.	No amendments necessary.
Policy 901.5.13 Evaluate the use of hazardous household products and assess impacts and seek to eliminate the use of these products.	Not completed.	No.	The County will evaluate this policy to seek its viability.
Policy 901.5.14 Revise LDR's to incorporate recommendations of the EPA water quality protection program.	The County has adopted ordinances such as requirements for sewer hookup when it becomes available, "No Discharge Zone", requirement for pump-out facilities in marinas, and environmental standards and design criteria to improve water quality.	Yes.	No amendments necessary.
Policy 901.5.15 Continue inspection of all sewage treatment plants and enforce current state regulations.	The Florida Department of Environmental Protection (DEP) regulates about 250 permitted wastewater treatment plants in the Florida Keys. AT minimum these facilities are inspected annually to ensure compliance with permit requirements.	Yes.	No amendments necessary.
Policy 901.5.16 Facility siting and design standards for waste treatment plants.	The completion of the SWMP in 2000 provided a standard for level of treatment as well as criteria for the siting of wastewater treatment plants.	Yes.	No amendments necessary.
Policy 901.5.17 Waivers for setbacks requirements in LDRs to accommodate	The Planning Department regularly reviews waivers for setbacks on a case by case	Yes.	No amendments necessary.



wastewater treatment plant expansion may be waived under certain conditions.	basis.		
Policy 901.5.18 Require all existing development to connect to public sewage treatment plants within one year of plant start-up.	Monroe County Code of Ordinances Sec. 15.5-21 requires the connection of existing development to public sewage treatment plants within 30 days of actual availability.	Yes.	No amendments necessary.
Objective 1001.1 Ensure that stormwater management facilities are available concurrent with the impacts of development.	Monroe County has completed a Stormwater Master Plan that is being implemented through various means such as on-going FDOT road projects, and private development. Monroe County will continue to review projects to ensure that standards are met. Monroe County continues to acquire funding from the South Florida Water Management District and other sources to implement stormwater projects.	Yes.	No amendments necessary.
Policy 1001.1.1 Adopt established level of service standards for stormwater management.	Monroe County has completed a Stormwater Master Plan that is being implemented through various means such as on-going FDOT road projects, and private development. Monroe County LDR Sec. 9.5-293 requires observation of BMPs and/or a stormwater management plan.	Yes.	Monroe County will review the SMMP for possible amendments to the Comp. Plan. To improve standards for stormwater management.
Policy 1001.1.2 Provide a Concurrency Management System within the LDR's ensuring the provision of stormwater management systems are available concurrent with development.	Monroe County LDR Sec. 9.5-293 requires observation of BMPs and/or a stormwater management plan.	Yes.	No amendments necessary. However, Monroe County will look to establish a Concurrency Management System.
Policy 1001.1.3 Adopt a Stormwater Management Ordinance for quality and quantity.	Monroe County LDR Sec. 9.5-293 requires observation of BMPs and/or a stormwater management plan.	Yes.	No amendments necessary.
Policy 1001.1.4 Requires all drainage facility	Monroe County LDR Section 9.5-293	Yes.	No amendments necessary.



improvements to conform to the adopted LOS standards.	requires applications for Monroe County Building Permits will be required to contain a stormwater management plan.		
Policy 1001.1.5 Requires County review of all development permits to determine compliance with stormwater management design criteria.	Monroe County LDR Section 9.5-293 requires applications for Monroe County Building Permits will be required to contain a stormwater management plan.	Yes.	No amendments necessary.
Policy 1001.1.6 Complete an inventory and analysis of all public and private drainage facilities.	SMMP was completed in August 2001. This study included a survey of public and private drainage facilities.	Yes.	No amendments necessary.
Policy 1001.1.7 Adopt and implement stormwater quality evaluation and estimation criteria and techniques into the County stormwater management regulations and LDR's.	Monroe County LDR Section 9.5-293. Surface Water Management Criteria contains technical criteria for evaluation of discharge and techniques for stormwater management.	Yes.	No amendments necessary.
Objective 1001.2 Maintain a five-year schedule of stormwater management capital improvements.	Completion of SMMP produced a list of priority projects.	Yes.	Amend Comp. Plan to reflect the recommendations of the SMMP.
Policy 1001.2.1 Establish priority level guidelines for stormwater management capital improvements.	Completion of SMMP produced a list of short-term and long-term priority for implementation of the SMMP plan.	Yes.	Amend Comp. Plan to reflect the recommendations of the SMMP.
Policy 1001.2.2 Establish as a priority the connection of existing drainage problems affecting nearshore waters or Outstanding Florida Waters.	Completion of SMMP produced a list of priority projects.	Yes.	Amend Comp. Plan to reflect the recommendations of the SMMP.
Objective 1001.3 Complete Stormwater Management Master Plan to ensure attainment to adopt LOS.	The SMMP was completed in 2001.	Yes.	Amend Comp. Plan and Code of Ordinances to be consistent with findings of the SMMP.
Policy 1001.3.1 Complete a detailed Stormwater Master Plan to ensure attainment of adopted LOS.	The SMMP was completed in 2001.	Yes.	Amend Comp. Plan and Code of Ordinances to be consistent with findings of the SMMP.



Policy 1001.3.2 Enter into an interlocal agreement with SFWMD, EPA, DER and NOAA to document pollutant loads from stormwater runoff.	No change. There is currently no database to measure pollutant loads from stormwater runoff.	No.	Monroe County will work with state and federal agencies to establish a baseline data for pollutant loads from stormwater runoff.
Policy 1001.3.3 Evaluate the performance of stormwater management systems	SMMP was completed in 2001. Findings of the SMMP indicate that stormwater treatment in Monroe County is inadequate and limited. The SMMP is being implemented through various means such as on-going DOT road projects, and private development.	Yes.	Amendments necessary. Other recommendations of the SMMP have to be amended into the Comp. Plan and the Code of Ordinances.
Objective 1001.4 Establish intergovernmental coordination related to stormwater management. Implement the Stormwater Management Master Plan.	SMMP completed in 2001. Findings of the SMMP indicate that stormwater treatment in Monroe County is inadequate and limited. Monroe County has completed a Stormwater Master Plan that is being implemented through various means such as on-going DOT road projects, and private development.	Yes.	No amendments necessary.
Policy 1001.4.1 Enter into interlocal agreements to protect drainage features and to increase capacity of drainage facilities.	Monroe County has coordinated with DOT to improve drainage facilities as other public improvements projects are constructed.	Yes.	No amendments necessary.
Policy 1001.4.2 Meet with the SFWMD and SFRPC prior to revisions of drainage policies and ordinances.	Monroe County LDRs Section 9.5-293.1 requires consulting with DEP and the SFWMD on drainage policies and ordinances.	Yes.	No amendments necessary.
Objective 1101.1 Work with Dade County to protect the Florida City Wellfield from potential sources of groundwater contamination.	Monroe County and the FCAA continuously monitor development in Dade County to protect Florida City Wellfield.	Yes.	No amendments necessary.
Objective 1101.2 Identification and mapping of fresh water lenses.	FWS has mapped freshwater lenses.	Yes.	No amendments necessary.
Policy 1101.2.1 Adoption of an amended	No amendments to LDRs since adoption of Comprehensive Plan.	No.	The SMMP will be reviewed for necessary amendments



stormwater management ordinance.			to the Comp. Plan, the Code of Ordinances, and/or LDRs.
Policy 1101.2.2 Implementation of programs reducing pollutant discharges into groundwater.	Monroe County continues to participate in various programs to improve water quality.	Yes.	Monroe County has completed and is now implementing the findings of the SMMP and the SWMP.
Policy 1101.2.3 Interlocal Agreement with USFWS and SFWMD to map and evaluate freshwater lenses.	No interlocal agreement with FWS and SFWMD. However, as needed the County coordinates with these agencies to evaluate freshwater lenses.	No.	No amendments necessary.
Policy 1101.2.4 Pending completion of freshwater lens study, Monroe County shall continue to restrict percentage of impervious surfaces through Application of open space ratio in accordance with the LDRs.	Current LDRs regulate the open space requirements in wetlands and in habitat containing freshwater lens.	Yes.	No amendments necessary.
Policy 1101.2.5 Revise LDRs to protect freshwater lenses. Assign negative points in the Point System for developments in freshwater lens recharge areas.	The ROGO system has negative points for development in areas which would typically be freshwater lens recharge areas such as, Key Deer habitat, and pinelands.	Yes.	No amendments necessary.
Objective 1301.1 Coordination mechanisms to ensure that consideration is given to the impacts of development upon the plans of adjacent municipalities, counties, the region, the State and the Federal Government.	The County regularly coordinates with adjacent municipalities, counties and state and federal agencies on projects that may impact the county.	Yes.	No amendments necessary.
Policy 1301.1.2 Coordinate with Dade, DNR and SFWMD on all land and water management plans affecting Card Sound.	The County continuously monitors activities in Dade County that may impact Card Sound.	Yes.	No amendments necessary.
Policy 1301.1.4 Initiate an interlocal agreement with Dade providing for notification and review procedures Monroe County can comment on land use and regulatory issues concerning the potable water wellfield, aquifer, and aquifer recharge areas.	The County continuously monitors activities in Dade County that may impact Card Sound.	Yes.	No amendments necessary.



Policy 1301.1.5 Work with the FCAA, SFWMD and Dade to ensure the protection and availability of an adequate raw water supply to meet Monroe County needs through 2010 from the Florida City well field.	The County coordinates with FCAA, SFWMD to ensure the protection and availability of water supply for Monroe County.	Yes.	No amendments necessary.
Policy 1301.1.7 Coordinate an evaluation and appraisal of the Comprehensive Plan adopted levels of service, annual public facility capacity analysis, and the Consumptive Use permit with FCAA.	Monroe County annually completes a public facility report that includes demand for water, status of FCAA's Water Use Permit, and FCAA's 6-year Capital Improvement Plan.	Yes.	No amendments necessary.
Policy 1301.1.14 Participate, review and comment in SFWMD planning and management activities. Delegate representatives to SFWMD Advisory Committees and seek to maintain equal representation on the SFWMD Governing Board.	On-going activity. There is a representative from the Florida Keys on the SFWMD Governing Board.	Yes.	No amendments necessary.
Objective 1301.2 Coordinate with municipalities and other appropriate entities to plan and implement programs to improve water quality. [9J-5.015(3)(c) 3 and 6]	The County coordinates with local municipalities, as well as state and federal agencies to implement programs to improve water quality.	Yes.	No amendments necessary.
Policy 1301.2.1 Implement water quality improvement programs by intergovernmental agreement.	The County coordinates with local municipalities, as well as state and federal agencies to implement programs to improve water quality.	Yes.	No amendments necessary.
Objective 1301.3 Level of service standards shall be reviewed with the entity actually responsible for providing the facilities to ensure that adequate capacity is available to meet the needs of existing and future residents.	The County coordinates with the FCAA on ensuring that water supply and the sewage treatment plants that are being constructed meet the needs of existing and future residents.	Yes.	No amendments necessary.
Policy 1301.5.4 Meet with the SFWMD and the SFRPC to ensure that the local regulatory framework is consistent with the planning	Monroe County LDRs Section 9.5-293.1 requires consulting with DEP and the SFWMD on drainage policies and	Yes.	No amendments necessary.



objectives and regulations of the region when updating drainage policies or ordinances.	ordinances.		
Policy 1301.6.1 Participate in the Florida Keys Advance Identification of Wetlands (ADID) Program.	The County worked with state and federal agencies to complete the ADID.	Yes.	No amendments necessary.
Policy 1301.6.2 As part of the ADID Program, continue to cooperate with the EPA, the ACOE, the FGFWFC, and the USFWS to develop a wetlands functional assessment protocol.	As a follow-up to ADID the County worked with state and federal agencies to complete the KEYWEP.	Yes.	No amendments necessary.
Policy 1301.6.3 As part of the ADID Program, Monroe County, EPA, FWS, and FGFWFC will jointly carry out the functional analysis of wetlands.	As a follow-up to ADID the County worked with state and federal agencies to complete the KEYWEP.	Yes.	No amendments necessary.
Policy 1301.6.4 Work cooperatively with the ACOE, EPA, DER, DNR, FGFWFC, and others as appropriate, to determine funding sources to support the wetlands restoration program.	The County coordinates with other agencies to find funding for wetlands restoration. With the completion of the LAMP, the County will prioritize and seek funding to manage and restore wetlands.	Yes.	No amendments necessary.
Policy 1301.6.5 Cooperate with the FGFWFC in its effort to map freshwater wetlands and disturbed wetlands.	The County coordinated with state and federal agencies to map wetlands through the ADID and KEYWEP process.	Yes.	No amendments necessary.
Policy 1301.6.6 Environmental Resources, in consultation with Marine Resources, shall work cooperatively with the Land Authority in developing and administering the wetlands acquisition program.	Continuous activity.	Yes.	Change policy language to read that the Growth Management Division will work cooperatively with the Land Authority.
Policy 1301.7.1 Initiate an interlocal agreement with FWS and SFWMD to identify and map on GIS the freshwater lenses of the Florida Keys, their associated recharge areas and an analysis of the condition of the lenses.	No interlocal agreement with FWS and SFWMD. However, as needed the County coordinates with these agencies to evaluate freshwater lenses.	No.	No amendments necessary.
Policy 1301.7.2 Coordinate with applicable	The County will coordinate with FKAA and various state and federal agencies to	Yes.	No amendments necessary.



state agencies to promote utilization of grey water storage systems and utilization for all exterior irrigation and flushing purposes.	analyze use of grey water storage.		
Policy 1301.7.6 Assist the DCA in developing a coordinated agency review. The Growth Management Division shall continue to conduct meetings with the DER, NOAA, DNR, and ACOE to identify the environmental issues and contradictions in rules and authorities related to the permitting process for marinas, docking facilities, piers, mooring sites, hardened vertical shoreline structures, and dredging in the Florida Keys.	The Growth Management Division continually coordinates with various state and federal agencies on programs to manage boating impacts.	Yes.	No amendments necessary
Policy 1301.7.7 Coordinate boating impacts management activities with those of the FKNMS, DNR, USCG, and the USFWS.	The Growth Management Division through the Marine Resources Department continually coordinate with various state and federal agencies on programs to manage boating impacts.	Yes.	No amendments necessary

Summary

The following activities have been taken to implement Comprehensive Plan policies to improve water quality in the Florida Keys:

- Completion of SMMP.
- Completion of SWMP.
- Adoption of ROGO system.
- Adoption of LDR and Code of Ordinance amendments to implement findings of SMMP and SWMP.



Recommendations

- Adopt the Tier System as a mechanism for prioritizing land acquisition for water quality improvements.
- Review SMMP and SWMP for necessary amendments to the Comprehensive Plan, Code of Ordinances, and the LDRs.
- Annually update CIP to implement the SMMP and the SWMP.
- Continue to seek funding to implement recommendations of the SMMP and SWMP.
- Review LDRs to ensure consistency with Comprehensive Plan and the findings of the SWMP and the SMMP.

